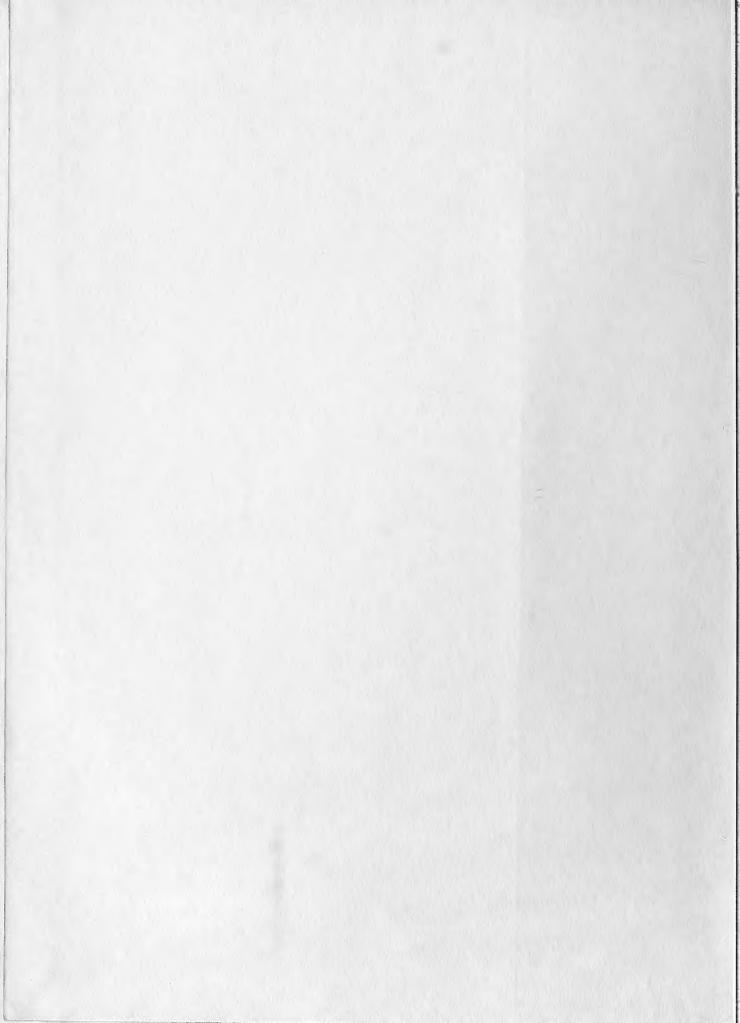
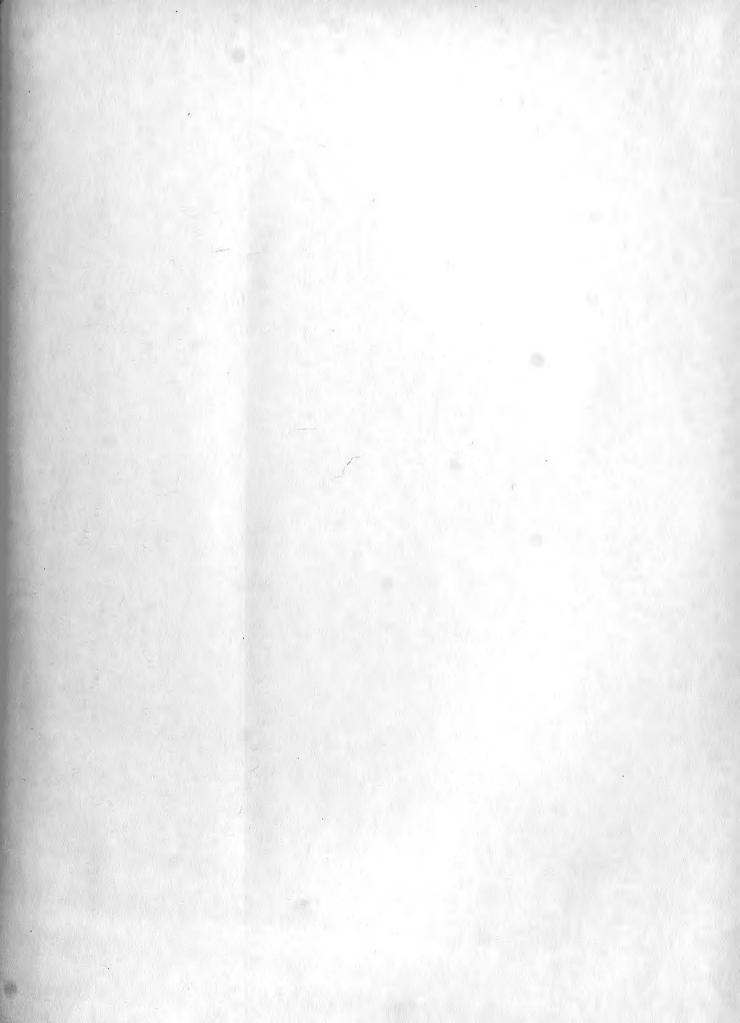
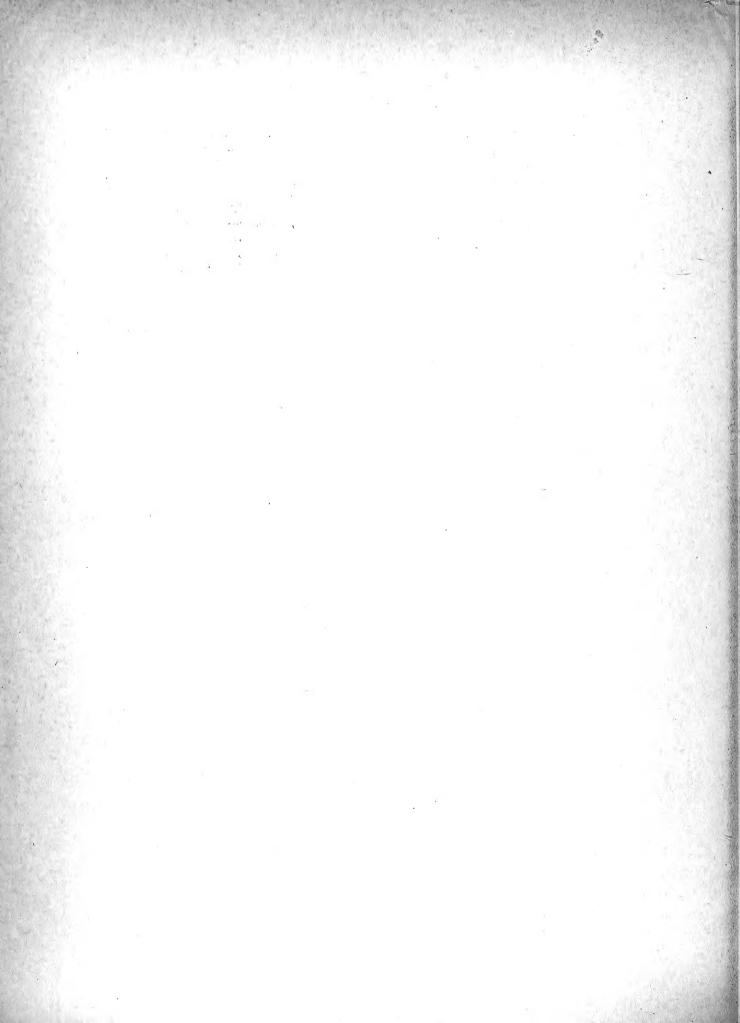


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Curr.Bibliogr.Fish.Sci., 1(1):1-11; A1. Rome, April 1958 (containing: references, and author index to, 580001-580066)

Explanatory Notes

- 1. The scope of the Bibliography is limited to documents referring to studies of living aquatic resources and their environments, or to methods of research applicable in this field. References on fishing craft, gear and methods and on primary fishing industries generally are included where their contents seem relevant to appraisal and use of resources.
- 2. Each issue of the Bibliography will consist of several sheets with text on both sides or, if a special request is made, on one side only. In the number at bottom right-hand corner of each page, digits preceding the colon identify the volume and part, those following it the page number within the part. (At bottom left-hand corner of each page is an internal scheduling number; at the bottom right-hand corner of the cover-sheet is the number of the project in the programme of work of Biology Branch, under which this Bibliography is produced.)

 Each issue will include, on blue sheets, an alphabetical index of authors' names to titles in that part, page numbers of which are distinguished by the prefix 'A'. We hope it will be possible also to include indexes to species, places and subjects mentioned in the issue following the one containing the references to which they refer. Cumulative indexes will also be issued from time to time. The cover-sheet carries near the bottom a bibliographic strip, in the form recommended by International Standards Organization (ISO/R.30), defining the contents of issue to which it is attached. The reference sheets and indexes should be assembled separately in standard quarto-size three-ring binders.
- 3. The references are cited in standard form, to be described fully in a subsequent issue of this Bibliography. Short titles of periodicals are formed as in "World List of Scientific Periodicals", 3rd Ed., London, 1952, and "World Periodicals List for Fisheries Science", the first draft of which was distributed by FAO in 1957. Comments and corrections received are being used in preparing a revised, indexed version of this.
- Lach annotation expands, by up to fifty words, the title of a document so far as is necessary to indicate kinds of organism, time, place and type of observation, fishing method and subjects dealt with.
- 5. The number at the top right-hand corner of each of the six compartments on a page identifies the reference in that compartment, the first two digits standing for the year of issue; the last four for the accession number during that year.
- 6. The letter 'M' (for Marine) in the bottom right-hand corner of a compartment signifies that this annotation will be included in the Bibliographia Oceanographica for the appropriate year of publication. The letter 'F' (for Freshwater) in same position indicates that document referred to is relevant to inland fisheries or resources. References to diadromous species, to brackish waters or estuaries, and to techniques and equipment of general application are indicated by combination 'MF'. (Letter combinations in the bottom left-hand corners of boxes record, for internal purposes, location of document and name of annotator.)

 FAO/58/4/2813

This is the first issue of a series which will be distributed at monthly intervals, in the first instance to collaborators in the bibliographic programme of the Biology Branch of FAO Fisheries Division. It contains references, with short indicative annotations, for documents published in 1958 which contribute to knowledge of living resources of the seas and inland waters.

The titles have been selected and annotated mainly by the staff of the Branch. We wish, however, to acknowledge here the collaboration of librarians of research institutions, editors of certain periodicals and individual research workers who are sending us accession lists, special bibliographies and proof copies of forthcoming publications, and are exchanging draft annotations, permitting re-use of some already published or providing annotations of papers which, because of their language or for some other reason, are not readily accessible. In such ways, it is hoped that the coverage of world literature will eventually be virtually complete and titles will be included in the lists with the least possible delay. We hope that the recipients of this Bibliography will help us in this object by commenting on the suitability of its present form, by encouraging their colleagues to send annotated references or reprints of their publications to ensure their prompt inclusion and in any other ways which may be apparent.

If you wish to continue receiving regularly the "Current Bibliography for Fisheries Science", fill in the strip below and send it to: Chief, Biology Branch, Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.



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Canad.J.Zool., 36(1):45-7

Studies on the development of the kidney of the Pacific pink salmon (Oncorhynchus gorbuscha (Walbaum))

II. Variation in glomerular count of the kidney of the Pacific pink salmon

Counts of the glomeruli of pink salmon fry raised in fresh water were compared with those of fry raised in sea water. A significant increase in the count was observed in fry of the same fork length raised in fresh water.

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The metazoan parasites of the Heterosomata of the Gulf of St. Lawrence. III.
Copepoda parasitica

Four species and one subspecies of parasitic copepods are recorded and briefly described from the Heterosomata of the Gulf of the St. Lawrence, and the distribution of the hosts indicated.

Fisher, K.C. & C.M. Sullivan (1958)580035 Canad.J.Zool., 36(1):49-63

The effect of temperature on the spontaneous activity of speckled trout before and after various lesions of the brain

The frequency of spontaneous movements made by speckled trout was determined at a number of different constant temperatures. The relation between the frequency and temperature was found to be complex, showing two maxima. Brief consideration was given to the legitimacy of relating the activity of animals in different constant levels of environmental factors with behavior in gradients of these factors.

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Cornwall, I.Z. (1958) Canad.J.Zool., 36(1):79-84

Identifying recent and fossil barnacles

The study of the microstructure of the shells of sessile barnacles shows that in many of them there is a figure, or pattern, that is constant in both recent and fossil shells of the same species and this can be used in identification. It is quite easy to find the pattern in the shell and the method of doing it is fully described in this paper.

Ford, P. & J.D. Newstead (1958) 580033
Canad.J.Zool., 36(1):15-21
Studies on the development of the kidney of the Pacific pink salmon (Oncorhynchus gorbuscha (Walbaum)) I.
The development of the pronephros

The literature relating to pronephros development in fishes is discussed and the course of development in the pink salmon described. The vascularization of the kidney is described and the histological differentiation of the clements of the kidney listed with special special respect to the epithelia of the tubules. The appearance of the myeloid tissue is noted.

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Odishaw, H. (1958)

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Monroy, A.	580024			
Mundt, 2.	580066			
Nagabushanan, A.K. Nakano, E., G. Giudice &	580005			
A. Monroy Nalbantoglu, U.	580024 580043			
· National Canners Association	580031			
Newstead, J.D. Nielsen, H.S. & P.K. Jensen	580033 580065			



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS Viale delle Terme di Caracalla, Rome, Italy

CURRENT BIBLIOGRAPHY FOR FISHERIES SCIENCE

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<u>Curr.Bibliogr.Fish.Sci.</u>, 1(1):T1; G1 Rome, May 1958 1(2):1-26; A1-2

(containing:

taxonomic and geographic indexes to 580001-580066 references, and author index to, 580067-580222)

Explanatory notes

(The following notes are additional to those attached to the first issue of this Bibliography.)

The following describes the convention adopted for this Bibliography to indicate the languages of the texts and summaries of papers annotated.

- 1. A language is indicated by its standard symbol. A list of the more common symbols follows these notes. The symbols are adapted from the UNESCO "Bibliography of interlingual scientific and technical dictionaries", 1954.
- 2. The necessary symbols follow the English form of the title after a full stop, whether this form is the original title or a translation of it.
- 3. Symbols are inserted only for languages other than the language of the original title if this is also the language of the text. The only exception to this rule is the case of a wholly multi-lingual paper, such as are prepared by the Inter-American Tropical Tuna Commission. In such cases, symbols are given for all languages used.
- 4. When the language of the text is different from that of the title the symbol for the former is underlined and this symbol precedes any others relating to summaries, which latter are not underlined.
- 5. If the original title is written in other than Latin script and is not transliterated, the English translation is cited as if it were the original, but in parentheses. In such cases, the language symbol of the text is always given and also symbols for all summaries, including the English one if any.
- 6. In general, where the title is given in several languages, the language of the title quoted is determined by an order of precedence based on that in the appendix of the "World List of Scientific Periodicals" for the languages of proceedings of international congresses, i.e., (1) English, (2) French, (3) Spanish, (4) Russian, (5) German.

With this issue are included on yellow paper taxonomic and geographic indexes to titles annotated in the first issue. The pages for these indexes are distinguished by the letters T and G respectively. It is not at present practicable to issue subject indexes but these will be started as soon as possible.

Common languages. English and native names, and symbols

English name	Native name	Symbol
Afrikaans	Afrikaans	Af
Albanian	Skip	Sk
Arabic	Arabiya	Ar
Bulgarian	Bulgarski	Bu
Chinese	Chunghwa	Ch
Croatian	Hrvat	Hr
Czech (Bohemian)	Cestina	Cs
Danish	Dansk	Da
Dutch	Nederlands	No
English	English	En
Finnish	Suomi	Su
French	Français	Fr
Gaelic	Gaeilge	Ga
German	Deutsch	De
Greek	Helleniki	He
Hebrew	Iwrit	Iw
Hindi	Hindi	Hi
Hungarian	Magyar	Mg
Icelandic	Islandsk	Is
Italian	Italiano	It
Japanese	Nippon	Ni
Latin	Latinus	Lat
Lettish	Latviski	L v
Lithuanian	Lietuviskai	Li
Malay (Indonesian)	Malayu	M1
Norwegian	Norsk	No
Polish	Polski	P1
Portuguese	Português	Pr
Rumanian	Român	Ro.
Russian	Russkij	Ru
Siamese	Thai	Th
Spanish	Espanol	Es
Swedish	Svensk	Sv
Tamil	Tamil	Ta
Turkish	Türkçe	Tü
Ukranian	Ukrainskij	Uk.



Doacon, E.L., C.H.B. Priestley & W.C. Swinbank (*Climatology, Reviews of Research UNESCO, Paris, p. 9-34 Gvaporation and the water based a review of the subject, conta a review of the present stagknowledge on evaporation from oceans.	earch, alance aining also ge of	Motwani, M.P. & S.J. Karamchandani (1958) Curr.Sci., 27:55-6 A note on the food and feedin of Clupisoma garua (Hamilton) Eutropiichthys vacha (Hamilton Allahabad (U.P.) Percentage composition of store contents and notes of feeding	and n) from
FAO:tl	MF	FAO:glk	F
Drummond, A.J. (1958) Climatology, Reviews of Rescursion and the thermal backers on the subject, contants on the energy exchange sea and atmosphere.	alance	Ganapati, P.N. & P.V. Bhavanarayana (1958) Curr.Sci., 27:57-8 Pelagic tunicates as indicate water movements off Waltair c Preliminary announcement of r analysis of composition of po of pelagic tunicates in sampl a station in Lawson's Bay, Wal	oast csults of pulations es takon at
FAO:tl	MF	FAO:glk	M
Anonymous (1958) Curr.Sci., 27:48 Marine Biological Station, 1 (S. India) Notes on facilities and activ		Baid, I. (1958) Curr.Sci., 27:58-9 Occurrence of Artemia salina Lake, Rajasthan Discussion of taxonomic statu description of the lake in wh find was made, with notes on within the lake, biology and reproduction.	s; ich tho
FAO:glk	M	FAO:glk	MF
			1(2):1

580076 Anonymous (1958) Snodgrass. F. L. (1958) 580073 Trans. Amer.geophys. Un., 39(1):109-13 ICY Bull., (8) In Trans. Amer. geophys. Un. 39(1):175-8 Shore-based recorder of low-frequency First sea surface gravimeter ocoan waves Description of the instrument and its Description of the instrument, its operation. response characteristics and calibration. GLK:tl M GLK:tl M 580077 580074 Maroc. Service central de Snodgrass, F., W. Munk - " (1958) (1958)statistiquos & M.J. Tucker Rabat, 36 p. Trans. Amer. geophys. Un., 39(1):114-20 Bulletin mensuel de statistique No. 3 Offshore recording of low-frequency occan waves (Monthly statistics bulletin No.3) Includes monthly table of fish Description of the instrument, landings, by areas, for the period its sensitivity and operation. October 1956-November 1957. FAO:sjh M GLK: tl M 580078 Anonymous (1958) Lichardová, D. (1958) 580075 IGY Bull., (7) In Trans. Amer. goophys. Un., Biológia, 13:129-33 Príspovok k poznaniu jednodňovick 39(1):159-62 Occanographic expedition Downwind (Uphomoroptora) ramion Dunaja a periodických mlák na Zitnom ostrove Description of the tracks of the expedition in the eastern South Pacific; (Contribution to the knowledge of notes on previous expeditions in the Ephomoroptora of the dead branches of the area; observational programme, and short Danubo and the periodical pools on the description of participating vessels Schüttinsol Island) Ru De & their oquipment. Short description of the localities of collection and description of 20 spp. of benthic larvae of Ephemeroptera. GLK tl M FAO:tl

Pronant, M. (1958) 580079
C.R.Acad.Sci., Paris, 10:1582-5
Leologic des sables intercetidaux et traduction approximative des dennées granulométriques en nombres de grains

(...cology of intorcotidal sands and the rough conversion of granulometric results into numbers of grains)

By log-log graphic determination of grain number as a function of sieve mesh size, properties of ecological significance are revealed, & such data relating to beaches of Brittany are made comprehensible.

Scott, D.M. & H.D.Fisher (1958) 580032 J.Fish.Ros.Bd Canada, 15(1):1-4 Incidence of a parasitic ascarid, Porrocaccum decipions, in the common porpoise, Phocoona phococna, from the lower Bay of Fundy.

Infestation rates determined from 150 1952-56 samples; & also one specimen of Delphinaptorus leucas was examined.

FAO:sjh

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GLK:sjh

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Hanuška, L. (1958) 580080 Biológia, 13(1):53-6 Einige interessante Protozoen der Donau

(Some interesting Protozoa of the Danube) Ru Cs
Description of 3 Actinomyxidia and 2 Suctoria found in the Danube between Bratislava and Stúrovo.

Piko, G.C. & B.H.Maxwell (1958) 580083 J.Fish.Rcs.Bd Canada, 15(1):5-17 The abundance and distribution of the North Sca-lion (Eumotopias jubata) on the coast of British Columbia

Rosults of a summor census, 1956, compared with previous surveys. Changes in distribution; effect of mortality on the stocks; maturity; reproductive behaviour & rate; rate & causes of pup mortality.

FAO:sjh

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580081

GLK:sjh

M

Hola, I. (1958)

Holsinki, 23 p. (mimoo)

Kortomus morentutkimuslaitoksen
toiminnasta vuonna 1957

(Annual report of the Institute of Marine Science for the year 1957)
Description of the activities of the Institute, & of the expeditions with research vessel. List of publications by scientists of the Institute issued in 1957.

DeLury, D.B. (1958) 580084

J.Fish.Res.Bd Canada, 15(1):19-25

The estimation of population size by a marking and recapture procedure

Schumaker and Schnabel estimates are compared and reasons given for preferring the former. This formula is extended to cover mortality and recruitment in the population. Confidence limits are provided according to standard regression theory.

TL:tl

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GLK:sjh

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Miller, R.B. (1958) 580085 J. Fish. Res. Bd Canada, 15(1):27-45 The rôle of competition in the mortality of hatchery trout

Review of literature shows survival of hatchery trouts (brown, brook, & cutthroat) is poor if there is resident wild population, probably because of competition for food, during which stores of some metabolite are exhausted & they die of acidosis or starvation.

F

GLK:sjh

Tabata, S. &

R.J. LoBrassour (1958)

J.Fish.Ros.Bd Canada, 15(1):91-113

Sea water intrusion into the Fraser River and its relation to the incidence of shipworms in Steveston Cannery Basin

River discharge, tides, topography of

settlement of larvae of Bankia setacea,

river channel & basin influence

survival of which is determined by

salinity. Prodiction that dredging channel would prevent infestation.

MF

580088

Vladykov, V.D. & 580086 W.I. Follott (1958)J. Fish. Ros. Bd Canada, 15(1):47-77 Redescription of Lampetra ayresii (Günther) of Western North America, a species of lamproy (Petromyzontidae) distinct from Lampetra fluviatilis (Linnacus) of Europo

Detailed ill. description of former. & comparison with latter, sp. Distribution, synonymy, morphometry.

Manton, S.M. (1958) 580089 Nature, Lond., 181:748-51 Embryology of Pogonophora and

classifications of animals

GLK:sjh

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MF

Trites, R.W. & R.W. Banks (1958) 580087 J. Fish. Ros. Bd Canada, 15(1):79-89 Circulation on the Scotian shelf as indicated by drift bottles

Analysis of surface movements by drift bottles released in Aug. 1954, suggests a cyclonic circulation controd near Sable Island Bank. Gives calculated drift speeds.

Fogg, G.H. & G.T. Boalch (1958) 580090 Naturo, Lond., 181:789-90 Extracollular products in pure cultures of a brown alga

Proliminary announcement of an invostigation of extracellular products liberated by Ectocarpus confervoides in pure culture, giving chemical characterisation of the products, with a view to current interest in occurrence of dissolved organic substance in natural waters.

GLK:sjh

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GLK:glk

M

Shatoury, H.H. (1958) Nature, Lond., 181:790-1 A freshwater mutant of Balanus amphitrite Occurrence of a Suez Canal form in a tank supplied with freshwater from the Nile.	Fish. Nows Lott. Aust., 17(1):9 Progress report on prawn research Preliminary announcement of progre prospecting operations relating to	prawn
GLK: wad F	GLK: glk	
Porkins, E.J. (1958) Nature, Lond., 181:791 Microbenthos of the shore at Whitstak Kent Miscollaneous observations on distribution, floral and faunal composition & abundance, behaviour, etc.	FAO Fisheries Biology Branch,	ording hosaurus
GLK: wad M	FiB:sjh M	F'
Anonymous (1958) Fish. Nows Lott. Aust., 17(1):5, 9 Trust account aid for 'couta research Announcement of plans for development of research on barracouta.	University of California, Scripps Institution of Oceanography, Ref. 5 12 p. (mimeo)	8-10, (STOR) t No.2 s of d
GLK:glk M	GLK: glk M	

Majosaari, H. (1958) FiskTidskr.Finl., 65(1):3-6 Imotaimenten kasvatus lammikossa (Rearing of female trout in pond breeding purposes) Description of the results of investigations in Porla hatchery growth of trout, its food require a maturation.	ds for	Anonymous (1958) FiskTidskr.Finl., 65(1) Syntyykö Säkylän Pyhäjärveen uus kalalaji (Is there a new fish stock in la Säkylän Pyhäjärvi) Description of a bastard stock in vendace and powan in the lake.	ake
FAO:tl	F	FAO:tl	F
Ryhänen, R. (1958) FiskTidskr.Finl., 65(1):8-13 Havaintoja kalojen tukehtumisest "tuuletuskokeista" Mäyhäjärvellä (Observations on suffocation of and experiences on aeration of l Mäyhäjävi) Description of the disappearance oxygen in the ice-covered lake a results of the artificial aeratiit.	fish akc of	Dill, R.F. (1958) GeoTimes, 2(8):6-7 Investigating the sea floor with geologists Brief description of the uses of Contained-Underwater-Breathing in the submarine geological investigation.	f Self- Apparatus
FAO:tl	F	TL:tl	M
Licdos, M. (1958) FiskTidskr.Finl., 65(1):15-21 Mitä kalamichot miottivät (What fishermen think) Analysis of replies to a questic sent on a nation-wide basis for purpose of inquiring into the acproblems of fishermen, with a vicing improving fishing conditions.	the tual	Tchernia, P., H. Lacombe & P. Guibout (1958) Bull.Com.centr.Océanogr., 10:115 Sur quelques nouvelles observation hydrologiques relatives à la régéquatoriale de l'océan Indien (On some new hydrological observation of the equatorial region of the Ocean) Review of previous work; description transects and results obtained of the dynamics of the area and of the geostrophic current with measurements by G.E.K. Station	tion of An account comparison current
FAO:tl	М	FAO:glk	M

580106 Bourcart, J., C. Lalou & 580103 Union Géodésique et (1958)Géophysique Internationale (1958) M. Gennesseaux Bull. Com. centr. Océanogr., 10:144-52 Paris, 32 p. Le relief sous-marin du précontinent Chronique de l'U.G.G.I. No.9 entre le Rhône et La Ciotat (I.U.G.G. Chronicle No.9) En (The sub-marine relief of the precontinent Contains information on meeting and between the Rhône and La Ciotat) symposia of the Associations of the Revision of the chart of the Rhône sub-I.U.G.G. (including the International marine canyon with a view to facilitating Association of Physical Oceanography). study of deposition processes by the river. Description of bottom structure and overlying deposits. TL:tl M FAO:glk M Gille, P. (1958) Oppedal, G. (1958) 580107 580104 Fiskeridir. Småskr., (1), 41 p. Bull. Com. centr. Océanogr., 10:153-7 Phénomènes de houie à Douarnenez Lofotfiskets lønnsomhet 1957 (Rentability of Lofot fishery in 1957) (Swell phenomena at Douarnenez) Analysis of swell phenomena with Number of fishermen and different types reference to marine works. of boats participating in the fishery and results of catches by different types of gear. FAO:glk M FAO:tl M Evans, J.H. (1958) 580108 580105 South Africa. Fisheries J.Ecol., 46(1):149-67 Development Corporation (1958) The survival of freshwater algae during Cape Town, 6 p. dry periods. Part I. An investigation of Thirteenth annual report the algae of five small ponds The Corporation's research programme, its activities and annual accounts. Preliminary account, with description of the ponds, methods of investigation, Covers period 1st October, 1956, to 30th September, 1957. climatic factors, list of species, and results of experiments on survival conditions. FAO: tl FA0:glk

Krumholz, L.A. (1958) La Monte. F.R. et al. (1958). 580109 In On the biology of the Atlantic Bull.Amer.Mus.nat.Hist., 114:377-415 On the biology of the Atlantic marlins, marlins, Makaira ampla (Poey) and Makaira albida (Poey). Bull. Amer. Mus. Makaira ampla (Poey) and Makaira albida nat. Hist., 114:402-5 (Poey) Relative weights of some viscera in the Atlantic marlins Contains papers by La Monte, F.R., Krumholz, L.A., Krumholz L.A. & D.P. Weight of heart, stomach, caecal mass, de Sylva, & de Sylva, D.P., which see. intestine, liver, gall bladder, splcon, kidney and gonads, as percentage of total body weight; second table differentiates these percentages between sexes. M M HR:glk HR:glk 580110 580113 La Monte, F.R. (1958) Krumholz, L.A. & (1958)In On the biology of the Atlantic D.P.de Sylva marlins, Makaira ampla (Poey) and In On the biology of the Atlantic Makaira albida (Poey). Bull. Amer. Mus. marlins, Makaira ampla (Poey) and Makaira albida (Pocy). Bull. Amer. Mus. nat.Hist., 114:381-95 Scales of the Atlantic species of nat.Hist., 114:406-11 Some foods of marlins near Bimini, Makaira Bahamas Material examined; review of literature; description of the histology of marlin Weight and composition of contents of skin and of scale structure and stomachs from various individuals and patterns. frequency of occurrence of various organisms in the stomachs. HR:glk M HR:glk M La Monte, F.R. (1958) 580111 de Sylva, D.P. (1958) 580114 In On the biology of the Atlantic In On the biology of the Atlantic marlins, Makaira ampla (Poey) and marlins, Makaira ampla (Poey) and Makaira albida (Pocy). Bull. Amer. Mus. Makaira albida (Poey). Bull. Amer. Mus. nat. Hist., 114:396-401 nat.Hist., 114:412-5 Notes on the alimentary, excretory, and Juvenile blue marlin, Makaira ampla (Poey), from Miami, Florida, and West End, reproductive organs of Atlantic Makaira Bahamas. Material examined; description of body form, mouth region, gills, body cavity. Detailed body measurements. HR:glk M HR:glk M

Maroc. Sorvice central do 580115 statistiques Rabat. 36 p. Bullotin mensuel de statistique

Includes monthly table of fish landings, by areas, for the period November 1956-November 1957.

FAO:sjh

M

de Zylva, B.R.A. (1958) 580116 Bull.Dep.Fish., Coylon, (7), 25 p. Mechanization of fishing craft and the use of improved fishing gear

Description of the indigenous fishing craft of Ceylon, summary of experiments with non-indigenous craft, report of the results of mechanization of local craft and of the adoption of new fishing techniques.

GLK:glk

Ecology

M

Daubenmire, R.F., R.F. Smith 580117 & P.R. Needham (1958)Bull.ecol.Soc.Amor., 39(1):18-25 Report of the Committee on Applied

Report of the Committee's activities in connection with the use of insecticides, pollution control, reorganization of the U.S. Fish and Wildlife Service, and conservation of salmon spawning arcas.

GLK:glk

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580118 Papandroou, A. (1958) Université de Genève, Faculté de Droit, Thèse No. 525 La situation juridique des pêcheries sédentaires on haute-mor

(Juridical situation of sedentary fisheries in the high sea) Definition of sedentary fisheries and discussion of juridical problems raised by their existence in the high sea; traditional juridical regime of the high soa; practices of states with regard to these fisheries; the juridical basis to the exercise of rights over these fisheries; the doctrine of the continental shelf. glk M

580119 McDougal, M.S. & W.T. Burke Yale Law J., 67(4):539-89 Crisis in the law of the sea: community perspectives versus national egoism

Review of writings, legal arguments and conference decisions on aspects of the law of the sea, analysing the processes of claim and decision with respect to exclusive and inclusive rights, and discussing the common interest in an economic balance of exclusive and inclusive uses and the factors influencing authoritative decision makers

glk

Jakobsson, J. (1958) Rit Fiskid., 2(5):27 p.

A study of the plankton-herring relationship off the SW-Coast of Iceland

Description of the horizont al and vertical distribution of plankton and the distribution of herring in 1954-55. A brief method of analysis of plankton indicator samples is suggested.

FiB:tl

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580120

580121 Shimada, B.M. (1958) 580124 Hallgrimsson, I. (1958) Rit Fiskid., 2(6):5 p. Bull.interam.trop.Tuna Comm., 2:289-363 Geographical distribution of tho A short-cut method for estimating annual catches of yellowfin and skipjack zooplankton composition while at sea tuna from the eastern tropical Pacific Ocean from vossel logbook records, Short description of the method for 1952-1955 En Es estimating species frequency, and comparison of the estimates with Extensive tabulation preceded by conventional counting mothods. description of the sources of data and methods of compilation, discussion of the reliability of logbook catch estimates, of the distributions observed, and of the relation between tuna fishing and occanographic conditions. M M FiB:tl FAO:glk 580122 Anonymous (1958) Privett, D.W. (1958) 580125 Comm. Industr., 16:293-6 Mar. Obs., 28(179):23-8 South Africa's fishing harbours The exchange of heat across the sea surface Notes on major fishing harbours, landing places, jetties and fishing stations Discussion of the difficulties giving location and recent developments, encountered in measuring the exchange with notes on species caught and on processes, and in producing an annual fishing practices. evaporation map and an annual heat balance map for the southern hemisphere. FAO:glk M FAO:tl M 580123 Salo, E.O. & Poulson, E.M. (1958) 580126 W.H. Bayliff (1958) International Commission for the Res. Bull. Wash. Dep. Fish., (4), 76 p. Northwest Atlantic Fisheries, Halifax, Artificial and natural production of N.S., 4 p. silver salmon, Oncorhynchus kisutch, at Newsletter No. 27 Minter Creek, Washington Contains current information about Detailed description of installations, activities of ICNAF and its committees, methods and materials; data on upstream publications, news of fishing operations and downstream migration; studies of in the N.W. Atlantic as known at date and comparison between artificial and of issue (14.3.1958). natural propagation and the production from those methods.

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FAO:glk

Suzuki, 0. (1958) Alabama. Dopartment of 580130 580127 Bull.Jap.Soc.sci.Fish., 23:514-7 Conservation (1958)On the rolation botween the length of Alexander City, Ala., 200 p. Report for fiscal year October 1, 1956 ground rope of a Danish seine and the September 30, 1957 variation of its gape Behaviour of closing action with Includes reports on hatcheries. fisheries administration & research in different lengths of ground rope and with different towing speeds were connection with inland & marine sport & commercial fisheries. studied, by means of a model test. FAO: sjh SJH: sjh M MF 580128 Sagara, J. (1958) Nakagomo, J. (1958) 580131 Bull. Jap. Soc. sci. Fish., 23:505-10 Bull.Jap.Soc.sci.Fish., 23:518-22 Artificial discharge of reproductive On the seasonal variation of swimming elements of certain bivalves caused by layers of yellowfin tuna, big cycd tuna treatment of sea water and by injection and black marlin in the area of Caroline with NH4OH Ni and Marshall Islands. I. On the scasonal variation of swimming layer Experiments with ammonium hydroxide immersion and injections into gonad to Depth distributions of Neothunnus induce discharge of sexual products in macropterus, Parathunnus sibi & Makaira Mactra veneriformis, M. sulcataria, mazara on long-lines studied from Mcretrix lusoria, Gryphaca gigas and monthly data 1951-56. Tapos japonica. SJH:sjh M M SJH:sjh 580132 Iitaka, Y. (1958) 580129 Nakagomo, J. (1958) Bull.Jap.Soc.sci.Fish., 23:523-4 Bull.Jap.Soc.sci.Fish., 23:511-3 Model experiments on the sardine purse Relation between seasonal variation of swimming layer of yellowfin tuna and scine operating in Hyuganada. V. Ni En big eyed tuna and vertical distribution of chlorinity Ni En Comparative study of sinking behaviour of bottom margins of nets made of cotton & of polyvinyliden chloride A study of long-line catches of ("Saran"). Noothunnus macroptorus & Parathunnus sibi in Caroline & Marshall Is. area. SJH:sjh SJH: sjh M M

Nakagome, J. (1958). 580133

Bull.Jap.Soc.sci.Fish., 23:525-8

Scasonal variation of hooked-rate and mean fork length and relation among hooked-rate, mean fork length, sexes and migration of black marlin, Makaira mazara, in the western Pacific Ocean

Ni En

Differences between those relations in various parts of the area $130^{\circ}\text{H}-160^{\circ}\text{W}$, $35^{\circ}\text{S}-30^{\circ}\text{N}$.

SJH:sjh

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(1958)Sciences Biologiques Série B (Colloques), No.24, 322 p. Biologie comparée des espèces marines dans los différents districts de lour aire de répartition Fr (On the comparative biology of marine species studied in different districts of their area of distribution) Papers presented on: 1) & 2) reproduction & biological cycles in relation to geographic districts & temperature & salinity, 3) morphological & biometric variations in relation to miliou & goographic districts, 4) & 5) physiology & genetics of populations in their various districts 6) projects for future research; with record of discussions & report.

Union Internationale des

Fage, L. & P. Drach (1958)

répartition - Avant-projet

Un.int.Sci.biol., Sér.B (24):vii-xvi

Colloquo international sur la biologie

comparée des espèces marines dans les

(International conference on the compar-

ative biology of marine species studied

in different districts of their area of

Account of the history of the conference,

distribution - Proliminary plan)

its subject matter, reasons for

conducting it, purposes, and the suggestions made for its programme.

Un.int.Sci.biol., Sér.B (24):xvii

différents districts de leur aire de

Tamura, 0. (1958) 580134

<u>Bull.Jap.Soc.sci.Fish.</u>, 23:529-33

<u>Studies on the Japanese anchovy. I.</u>

Racial study (2) <u>Ni</u> En

Considers classification by vertebral counts of catches of Engraulis japonicus taken 1951-53 in Tokai, Nankai, & Nihonkai regions; discusses year-class fluctuations, growth of different types & their relation to water temperature, & the classification of shoals by their "entropy" (Doi, 1957).

SJH:sjh

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580138

580136

Arasaki, S., K. Nozawa 580135 & M. Miyake (1958)

Bull.Jap.Soc.sci.Fish., 23:534-8

On the pathogenetic water mold. I.

Ni En

Observations on life-cycle & culture (with special reference to pH requirements) of Saprolegnia parasitica isolated from Angiulla japonica, Hypomesus solidus (eggs), rainbow trout & their eggs, red wag sword tail & groy mullet.

SJH:sjh

MF

Toissior, G. (1958)

(Welcoming address)

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580142 Korringa, P. (1958) 580139 Marshall. S.M. & (1958)Un.int.Sci.biol., Sér.B (24):1-17 A.P. Orr Un.int.Sci.biol., Sér.B (24):43-7 Water temperature and breeding throughout The life history of the copeped the geographical range of Ostrea edulis Calanus finmarchicus in different latitudos Roview of evidence on the relation between temperature and spawning in critical examination of the hypothesis Discussion of differences in growth, that brooding temperature is a development, migrations and reproduction physiological constant for the spocios at different latitudes. and of the alternative hypothesis that the species consists of races breeding at different water temperatures; with discussion of the practical and sciontific implications of the conclusion reached. FiB:glk M FiB:glk Lubot, P. (1958) Foldmann, J. (1958) 580143 580140 Un.int.Sci.biol., Sér.B (24):19-29 <u>Un.int.Sci.biol.</u>, Sér.B (24):49-56 Cycle sexuel de Mytilus edulis L. et La reproduction des algues marines dans de Mytilus galloprovincialis Imk. dans ses rapports avec lour situation le Bassin d'Arcachon (Gironde) géographiquo (Sexual cycle of Mytilus edulis L. and (Reproduction of marine algae in of Mytilus galloprovincialis Imk. in tho relation to their geographic situation) Arcachon Basin (Girondo)) Discussion on ovidence on differences, Account of cytological changes in the from part to part of area of distribution course of gametogenetic development as of a species of algae, in the phenomena basis to report on sexual phenomena at of reproduction and alternation of throe stations in the chosen locality, generations and of the means of related to tidal, temperature and determining the causes of these salinity data, and some reference to variations. experiments on the stimuli of tho omission of sexual products. FiB:glk FiB:glk Durchon, M. (1958) 580141 Levring, T. (1958) 580144 Un.int.Sci.biol., Sér.B (24):31-42 <u>Un.int.Sci.biol.</u>, Sér.B (24):57-65 Problèmes posés par le comportement des Some modern aspects of growth and. Néréidiens au moment de leur reproduction reproduction in marine algae in different regions (Problems posed by the behaviour of Nercids at the moment of reproduction) Discussion of the rôle of various Discussion of observations on reproductive environmental factors in determination polymorphism in Perenerois cultrifera of cortain aspects of growth and Grubo and Norois (Coratonorois) costao reproduction of marine algae. Grube, and on differences in swarming behaviour of the former and of Noreis succinca Louckart and Platynorois dumcrilii Audouin and M. Edwards.

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Barnos, H. (1958) 580145
Un.int.Sci.biol., Sér.B (24):67-85
Processes of restoration and synchronization in marine ecology. The spring diatom increase and the "spawning" of the common barnacle, Balanus balanoides (L.)

Regional and local evidence on the synchronization of the spring diatom outburst and naupliar development of B. balanoides, with experimental evidence on the stimulus for the release of nauplii as part of the processes involved in synchrony.

Korringa, P. (1958) 580148 <u>Un.int.Sci.biol.</u>, Sér.B (24):109-16 On the supposed compulsory relation between oviparous oysters and waters of reduced salinity

Discussion of published records on the distribution of oviparous systems and on their anatomical and physiological features indicating adaptation to fluctuating salinity of a low level.

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Kinno, O. (1958) 580146 <u>Un.int.Sci.biol.</u>, Sér.B (24):87-92 A programmatic study of comparative biology of marine and brackish water animals

Discussion of field and laboratory investigations required for the establishment of an ecological diagnosis of a species.

Schlieper, C. (1958) 580149
Un.int.Sci.biol., Sér.B (24):117-27
Comparative study of Asterias rubens
and Mytilus edulis from the North Sea
(30 per 1,000 S) and the Western Baltic
Sea (15 per 1,000 S)

Data on chemical composition, rate of gonad development, rate of oxygen consumption, mechanical activity of frontal cilia, relative rate of heat tolerance, and rate of heart beats.

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Smith, R.I. (1958) 580147 <u>Un.int.Sci.biol.</u>, Sér.B (24):93-107 A note on the tolerance of low salinities by neroid Polychaetes and its relation to temperature and reproductive habit

A classification of salinity regimes is given and the osmoregulatory and reproductive modifications necessitated by these are discussed; the effect of temperature on chloride regulation is illustrated by experimental results obtained with Neanthes lighti Hartman.

Vorwoy, J. (1958) 580150
Un.int.Sci.biol., Sér.B (24):129-49
A plea for the study of temperature
influence on osmotic regulation

Examination of published data on osmotic concentrations of the blood of some crustaceans in waters of different salinities, with special reference to differences in the cures for this relation accompanying differences in temperature, and discussion of the mechanisms involved in accompating seasonal and other changes in temperature and salinity.

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Teissier, G. (1958) 580151 <u>Un.int.Sci.biol.</u>, Sér.B (24):151-7 Formes locales et biométrio

(Local forms and biometry)
Discussion of the use of biometrical
methods in the analysis of allometric
growth, with special reference to
multifactorial analysis.

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Breite

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Hardor, W. (1958)

Un.int.Sci.biol., Ser.B (24):171-7

Fundorten verschiedener geographischer

Doals with Engraulis onchrasicholus, E. ringons, E. mordax, Sardinops occilata, S. molanosticta, S. pilchardus, S. sagax, S. caoruloa, Cotongraulis mysticolus & Clupca harongus, illustrating all but the last, and giving measurements of the

Matsakis, J. & G. Potit (1958) 580155

<u>Un.int.Sci.biol.</u>, Sér.B (24):179-82

Sens et étendue des variations de la

forme du corps chez Idotea viridis,

(Nature and extent of variations of body form in Idotea viridis, a valve

Summary and discussion of differences

Die Darmlänge bei Clupcoiden von

(Stomach longth in clupooids from

localities of different geographic

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Morris, R.W. & 580152
B.T. Schoer (1958)
Un.int.Sci.biol., Sér.B (24):159-61

The relation of meristic characters in fishes to temperature and water movements

Data on <u>Clinocottus recalvus</u> takon on the Pacific coast of the U.S.A.

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Swedmark, M. (1958) 580153 <u>Un.int.Sci.biol.</u>, Sér.B (24):163-70 Variation de la croissance et de la taille dans différentes populations du téléostéen Gobius minutus

(Variation in growth and size in different populations of the Toleostean Gobius minutus)

Comparison of population studies at Penpoul in North Brittany, 48°N, and Gullmarsfjiord on the Swedish west coast, 58°N, and explanation of the differences observed in terms of varying ecological conditions, chiefly temperature and salinity.

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Swedmark, B. (1958) 580156
Un.int.Sci.biol., Sér.B (24):183-9
Variation morphologique dos différentes
populations régionales d'Halammohydra

Identification of various forms from data on variation in number of tentacles and statocysts and the distribution of different categories of nematocysts, and discussion of the determinants of the evolution of those forms.

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1(2):15

580160 Prosser. C. (1958) 580157 Marshall. S.M. & Un.int.Sci.biol., Sér.B (24):191-7 A.P. Orr Un.int.Sci.biol., Sér.B (24):221-6 Proposal for study of physiological variation in marino animals A preliminary note on seasonal changes in respiration in Copepods Roasons why physiological adaptations do not nocessarily correspond with Description of techniques in and morphological species and an results from recent experimental work. enumeration of the kinds of physiological measurements that might be made on populations of a single species or of closely related species. FiB:glk M FiB:glk M 580161 Bullock, T.H. (1958) 580158 Harder, W. (1958) Un.int.Sci.biol., Sér.B (24):227-32 Un.int.Sci.biol., Sér.B (24):199-203 Vorhalten von Organismen Gegenüber The objectives of studying physiology as function of latitude and longitude Sprungschichten Discussion of objectives in the study (Reaction of plankton-organisms to of physiological ecology with goography discontinuity layers) as a major controlled variable. Summary of previously published work and a preliminary report of new results. FiB:glk M FiB:glk M Fry, F.E.J. (1958) Spärck, R. (1958) 580162 580159 <u>Un.int.Sci.biol.</u>, Sér.B (24):205-19 Un.int.Sci.biol., Sér.B (24):233-9 The importance of metabolism in the The lethal temperature as a tool in distribution of marine animals taxonomy Discussion of the value of lethal Deals with the relation between marine temperature as an indox of presence or zoogeography on one hand and recent absonce of genotic identity; description ecological and physiological results on of technique for its determination and the other hand. of ovidence of the dependence of temperature lethality on prior environmental history and concurrent environmental situation.

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Božić, B. (1958) 580166 580163 Barigozzi, C. (1958) Un.int.Sci.biol., Sér.B (24):269-73 Un.int.Sci.biol., Sér.B (24):241-50 Recherches taxonomiques sur des formes Différenciation dos génotypes ot du genro Tigriopus Norman distribution géographique d'Artemia salina Leach: données et problèmes (Taxonomic researches on the forms of the genus Tigriopus Norman) (Differentiation of genetypes and Discussion of the taxonomic status of geographic distribution of Artemia salina various entities in the light of evidence Leach: data and problems) of sampling from various situations, and Doscription of chromosomo constitution of the results of various crossing of various observed polyploids, and experiments. analysis of pheno- and gonotypic variation and of the mochanisms responsible for those; summary of interesting problems in biology of Artemia. M FiB:glk FiB:glk M Zonkevitch, L. (1958) 580167 580164 Staiger, H. (1958) Un.int.Sci.biol., Sér.B (24):275-7 <u>Un.int.Sci.biol.</u>, Sér.B (24):251-8 Propositions adressées au Colloque Genetical and morphological variation in Purpura lapillus with respect to local (Proposals placed before the Conference) and regional differentiation of Suggestions for a plan of collaboration population groups between European marine biological stations. Examination of evidence on genetic heterogeneity and phenotypic polymorphism in this species as example of the value of littoral species for a study of the relation between population genetic structure and environmental conditions. M FiB:glk FiB:glk \mathbb{M} Battaglia, B. (1958) 580165 Segerstråle, S.G. (1958) 580168 Un.int.Sci.biol., Sér.B (24):259-68 Un.int.Sci.biol., Sér.B (24):279-81 Ecological differentiation and incipient The rôle of the Baltic in the work to intraspecific isolation in marine be planned at the Roscoff Symposium Copepods Discussion of salinity and temperature Racial differentiation in Porcellidium conditions in the Baltic to show the fimbriatum, P. sarsi, P. locanioides and favourable opportunities it offers for Tisbo reticulata and examination of the special zoogeographic and ocological oxistence of adaptive differences in studies. individuals from different populations and a report of crossing between populations. FiB:glk M M FiB:glk 1(2):17

580172 580169 Zenkevitch, L. (1958) Buchsbaum, R. (1958) Un.int.Sci.biol., Sér.B (24):317-20 Un. int. Sci. biol., Sér. B (24):283-Program of researches of marine biology Palcological factors in the soa proposed for the International Discussion of types of data needed for Geophysical Year marine paleoocology and of the Suggestions of lines of research and opportunities for application of its listing of stations proposed to be methods in marine research generally. coopted to the programme. M FiB:glk FiB:glk 580173 Kostovon, G.L., H. Rosa 580170 Mann, K.H. (1958) (1958)J. Inst. Biol., 5:29 & S.J. Holt Un.int.Sci.biol., Sér.B (24):287-97 A river studies centre at Roading A note on abundance and distribution of marine organisms of economic Notico of establishment of the contre importance by the University of Reading, with account of equipment, and problems to Discussion of the characteristics of be studied. marine organisms and the ecological and genetic bases of these characteristics in rolation to the needs of fisheries for information on the distribution, abundanco and bohaviour of species of economic importance, and description of a schomo for the systematic accumulation of data on these matters. FiB:glk GLK:glk

580174

Bogorov, B.G. (1958) 580171 Un.int.Sci.biol., Sér.B (24):299-315 Unification of plankton research

Recommendations for the collection of quantitative micro- and macro-plankton material, and of material for determination of diurnal phytoplankton production, and recommendations for the treatment of material.

Graham, A. (1958)

J.Inst.Biol., 5:37

Plymouth marine fauna

Review of book with same title by the Marine Biological Association (1957).

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Romanovsky, V. (1958) 580175 <u>Trav. Cent. Rech. Etud. océanogr.</u> , 3(1):3-6 Résultats de quealques mesures de	Sitarz, J. (1958) 580178 Trav. Cent. Rech. Etud. océanogr., 3(1):23-31
courants profonds (Results of some measurements of deep currents) Description of techniques of measurement	Mise au point et essais d'un couranto- mètre électrique è électrodes remorquées (G.E.K.) le long de la côte méditerra- néenne d'Antibes è Menton en été 1956
and calculation of currents in Golfe de Juan and Golfe de la Napoule, and the results.	(Review and experiments with an electric current metre with trailed electrodes (G.E.K.) along the Mediterranean coast from Antibes to Menton in the summer of 1956) Review of the theory of apparatus of this typo. Discussion of the practical aspects of the use of such apparatus. Report of
FAO:glk M.	experience in the use of the apparatus and results obtained. FAO:glk M
Duroche, J. & 580176 J. Serpaud (1958) Trav.Cent.Rech.Etud.océanogr., 3(1):9-13 Le courantographe BBT-NEYRPIC - Description - Fonctionnement - Utilisation (The currentograph BBT-NEYRPIC - Description , operation and use) General description of construction and operation; analysis of the causes of errors of precision in recording direction and speed; description of the diagrams produced.	Romanovsky, V. (1958) 580179 Trav.Cent.Rech.Etud.océanogr., 3(1):51 Observations océanographiques des navires stationnaires météorologiques (Oceanographic observations from stationary meteorological ships) Tabulation of surface temperature and salinity data obtained in 1953 and 1955 by the station at La Rochelle.
FAO:glk M	FAO:glk M
Romanovsky, V. (1958) 580177 Trav.Cent.Roch.Etud.océanogr., 3(1):17-22 Les causes d'erreurs dans la mesure des courants au point fixe (The causes of error in the measurement of currents at a fixed point) Discussion of the errors introduced by movements of the vessel when observations must be made from a vessel, with discussion of the conditions under which such observations may usefully be made, and comparison of such method of	Anonymous (1958) Science-Afrique, (10), item 64 Le Troisième Congrès de la P.I.O.S.A. (The 3rd Meeting of the P.I.O.S.A Pan-Indian Ocean Science Association) Brief account of the meeting.
moasurement (for accuracy) with observations made from an independent unit. FAO:glk M	HR:glk MF
	1(2):19

Anonymous (1958) 580181
Science-Afrique, (10), item 28
Le Colloque sur l'Océanographie et les pêcheries de la Côte Occidentale de l'Afrique

(The Colloquium on Oceanography and Fisheries on the Western Coast of Africa)
Brief account of the meeting.

Murphy, J. & J.P.Riley (1958) 580184

J.Mar.biol.Ass.U.K., 37:9-14

A single-solution method for the determination of soluble phosphate in sea water

A reagent containing sulphuric acid, ammonium molybdate and ascorbic acid may be used as a single-solution reagent.

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Cooper, L.H.N. (1958) 580182 J.Mar.biol.Ass.U.K., 37:1-3 Sea temperatures in Plymouth Sound

Monthly mean sea-water temperatures in Plymouth Sound, prepared by the Plymouth City Meteorologist, are presented as data for ecological studies in this area. In the last 40 years there has been a rise in mean temperature of about 0.3°C.

Dales, R.P. (1958) 580185 J.Mar.biol.Ass.U.K., 37:15-31 The function of the heart-body in polychaetes

Evidence is presented which supports the view that the heart-body is an haematopoietic organ, and the significance of this is discussed.

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Wilson, D.P. (1958) 580183 J.Mar.biol.Ass.U.K., 37:5-8 On some small Ianthina ianthina (L.) stranded on the isles of Scilly, 1957

Observations on the effect of growth on the relations between width and height, based on measurement of shells.

Nicol, J.A.C. (1958) 580186

J.Mar.biol.Ass.U.K., 37:33-41

Luminescence in Polynoids. IV.

Measurements of light intensity

The light energy omitted in a flash by single clytra of two polynoid worms has been measured, viz. Acholoë astericola and Lagisca extenuata. Maximal emission occurs at 515 m w.

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Nicol, J.A.C. (1958) 580187 J.Mar.biol.Ass.U.K., 37:43-7 Spectral composition of the light of Pholas dactylus L.

A spectral emission curve for the light of Pholas dactylus has been determined by means of spectral filters and photomultiplier cell. Emission extends from about 440 to 670 m μ , with a maximum at about 490 m μ . The emission curve is compared with the action spectrum determined by Hocht.

Russell, F.S. (1958) 580190

J.Mar.biol.Ass.U.K., 37:81-4

Notes on the medusa, Amphinema krampi
Russell

Further notes on the structure of the species observed by sections.

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Southward, A.J. (1958) 580188

J.Mar.biol.Ass.U.K., 37:49-66

Note on the temperature telerances of some intertidal animals in relation to environmental temperatures and geographical distribution

In experiments on four species of barnacles and four species of top-shells, the barnacles were found to be more resistant to high or low temperatures than the top-shells. Among each group of animals the degree of tolerance was related to the geographical distribution of the species and their zonation on the shore.

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Corner, E.D.S. & 580191

F.H. Rigler (1958)

J.Mar.biol.Ass.U.K., 37:85-96

The modes of action of toxic agents

III. Mercuric chloride and N-amylmercuric chloride on crustaceans

Differences between the susceptibilities of Artemia salina and Elminius modestus to the poisons do not reflect differences between the quantities of these compounds which the animals can tolerate in their tissues, but are directly related to the rates at which the poisons are accumulated.

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Llewellin, J. (1958) 580189

J.Mar.biol.Ass.U.K., 37:67-79

The adhesive mechanisms of monogenetic trematodes: The attachment of species of the diclidophoridae to the gills of gadoid fishes

An investigation of the adhesive mechanism in all nine species of the genus <u>Diclidophora</u> has shown that there is a common structure consisting of a pair of hinged jaws operated by intrinsic muscles and also by a more powerful extrinsic muscle which acts on a diaphragm to produce a suction pressure that is converted into a clamping action.

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Allon, J.A. (1958) 580192 J.Mar.biol.Ass.U.K., 37:97-112 Observations on Cochlodesma pratonue (Pultoney) (Eulamollibranchia)

The habits, morphology and ciliary feeding and cleansing mechanisms are described and compared with those of members of the related families
Thraciidae, Pandoridae and Lyonsiidae.
The complex ligament is described. The detailed structure of the siphons is described and related to their function of laying down mucus—lined inhalant and exhalant tubes.

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Green, J. (1958)

J.Mar.biol.Ass.U.K., 37:113-6

Eudactylina racholae n.sp., a Copopod parasitic on the electric ray, Torpedo nobiliana Bonaparte

The species, found among the gill filaments of the electric ray, is described and illustrated.

Colos, J.W. (1958) 580196

J.Mar.biol.Ass.U.K., 37:145-55

Nematodes parasitic on sea weeds of the genera Ascophyllum and Fucus

Redescription of Halonchus fucicola, causing galls on the thallus of the sea wood Ascophyllum nodosum. A new species, Halonchus dumnonicus, causing similar growths on the sea weeds Fucus vesciculosus and F. serratus is described.

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Barrington, E.J.W. (1958) 580194 J.Mar.biol.Ass.U.K., 37:117-26 The localization of organically bound iodine in the endostyle of Amphioxus

An account is given of some features of the organization of the endostyle of Amphioxus, with particular reference to the distribution of sites of mucus secretion as indicated by positive responses to tests for acid mucopolysaccharides. Crisp, D.J. & 580197
A.J. Southward (1958)
J.Mar.biol.Ass.U.K., 37:157-208
The distribution of intertidal organisms along the coasts of the English Channel

A study of many of the commoner intertidal organisms of the English and French sides of the Channel. The dominant organisms are treated quantitatively. Patterns of distribution are related to general trends in the physical environment and significant topographical details.

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Spencer, C.P. (1958) 580195 J.Mar.biol.Ass.U.K., 37:127-44 The chemistry of ethylenediamine tetraacetic acid in soa water

Records some data on the equilibria set up when EDTA is added to sea water and on the effect of variations of certain controlling factors.

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Parke, M., I. Manton & 580198
B. Clarke (1958)
J.Mar.biol.Ass.U.K., 37:209-28
Studies on marine flagellates. IV.
Morphology and microanatomy of a new species of Chrysochromulina

The description of a new species of the genus <u>Chrysochromulina</u>, <u>C. chiton</u>, includes for the first time some evidence from electron microscopy of sections in addition to the techniques previously used. Anatomical facts are given for the first time for the internal structure of the hatptonema. Microanatomical facts are also given.

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580199 Loosanoff, V.L. (1958) Nowell. G.E. (1958) - 580202 J.Mar.biol.Ass.U.K., 37:229-39 Biol. Bull., Woods Hole, 114:57-70. The behaviour of Littorina littorea (L.) Some aspects of behavior of oysters under natural conditions and its at different temperatures relation to position on the shore Exporimental evidence on the rate of A field and laboratory investigation pumping at different temperatures, and of patterns of zonation of winkles. under various conditions of rate of temperature change. HR:hr M FAO:glk MF Newell, G.E. (1958) 580200 Maruyama, K. (1958) * 58020 3 J.Mar.biol.Ass.U.K., 37:241-66 Biol. Bull., Woods Holo, 114:95-105 An experimental analysis of the behaviour Contractile protein from crayfish tail of Littorina littorea (L.) under natural musclo conditions and in the laboratory Myosin B extracted and purified from Studies the activities of winkles. Cambarus clarkii; some physicochemical particularly their responses to light properties, physical changes with ATP, and to gravity. and enzyme activity. HR:hr M FA0:glk M Hyman, L.H. (1958) 580201 Hyman, L.H. (1958) 580204 Biol.Bull., Woods Hole, 114:106-12 Biol. Bull., Woods Holo, 114:54-6 Notes on the biology of the five-The occurrence of chitin in the lunuled sand dollar lophophorate phyla Chemical determinations on Burrowing, the function of the lunules, distribution of the podia, feeding. representatives of Phoronida, marine and freshwater ectoprocta. FAO:glk M FAO:glk MF 1(2):23

580205 Noill. W.T. (1958) Bull.Mar.Sci.Gulf Caribb., 8(1), 97 p. The occurrence of amphibians and roptiles in saltwater areas, and a bibliography

The paper discusses the occurrence of salamanders, frogs, turtles, crocodilians, lizards, snakes and one tuatara in the saltwater areas of the world. Previously published accounts are summarized, and new findings are also presented.

Lacombe, H. & (195.8)P. Tchornia

Bull. Com. centr. Oceanogr., 10:209-14 Temperatures et salinities profondes en Méditerranée en période d'été - Etude préliminairo

(Deep temperatures and salinities in the Mediterranean during summer -

Proliminary study)

Review of data relating to 1,000, 1,500 & 2,000 m depth, from the THOR (1910), DANA (1921-30), AL LOBO (1923), ELIE MONNIER (1952-55) & CALYPSO (1955-56). T-S diagrams are given and discussed.

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580206 Bourcart, J. (1958) Bull. Com. contr. Océanogr., 10:188-91 Rapport sur une mission effectuée à bord de la CALYPSO en mai 1957

(Report of a mission of the CALYPSO in May 1957) Report of core-sampling operations in the northern Mediterranean off the

French Riviera and around Corsica.

580209 Saint-Guily, B. (1958) Bull. Com. contr. Océanogr., 10:215-8 Remarque sur l'importance de la force de Coriolis dans les courants marins

(Remark on the importance of Coriolis force in marine currents) Appraisal of certain dimensionless parameteres that permit qualitative approciation of this force.

FAO:glk

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Borthois, L. (1958) 580207 Bull. Com. contr. Océanogr., 10:192-208 Obscrvation d'une tranche d'eau suivie dans sos déplacements entre Basse-Indre et Saint-Nazaire

(Observations on a layer of water followed during its displacement between Basso-Indro and Saint-Nazairo) Hydrographic & motoorological data; methods for detection of movement. measurement of speed, turbidity & salinity; summary description of profiles; discussion of cbb- & flood-tido phonomona, the amplitude of displacement of the layer on ebb- & flood-tide, sedimentation, & the location of maximum turbidity. FAO:glk

580210 Lonnon, N. (1958) Fish. Nows Lett. Aust., 17(2):27, 29 Commercial fisheries of Hawaii

Brief notes on species caught and methods used.

GLK:glk

Warburton, F.E. (1958) 580211 Progr.Rop.Atl.Cst Stas, 68:3-5 The effects of boring sponges on oysters

Description of the damage caused by Cliona lobata to shell, muscle and hinge ligament, and its effects on fatness and growth.

Murray, A.R. (1958) 580214

Progr.Rep.Atl.Cst Stas, 68:20-3

Proliminary biology of Atlantic
salmon of the Little Codroy River,

Newfoundland

Notes on: life cycle and age designation; number, age and size of spawning adults; age and sex of kelts.

GLK:glk

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Floming, A.M. (1958) 580212 Progr.Rep.Atl.Cst Stas, 68:9-13 The commorcial longlining experiment, St. Anthony, Nfld., 1955

Experiment to analyse the profitability of fishing offshore and inshore grounds in early and late parts of the fishing season; description of boats and gear, bait, catches, financial returns and cod sizes.

Barnos, H. & J.J. Gonor (1958) 580215 Nature, Lond., 181:194 Neurosecretory cells in some Cirripedos

A first record of their occurrence in this group.

GLK:glk

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Tomploman, W. (1958) 580213

Progr.Rep.Atl.Cst Stas, 68:15-6

How cod spawn - Niclsen's observations

Quotation of carly published reports of observations on cod spawning in hatchery ponds.

Burton, J.D. & J.P. Riley (1958) 580216 Nature, Lond., 181:179-80 Germanium and gallium in soa-water

Notes on the quantities previously reported, on the method used by the authors and preliminary data on the new values of germanium and gallium content of sea water.

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Cwilong, B.M. (1958) 580217 Nature, Lond., 181:181 Bone, Q. (1958) Nature, Lond., 181:193-4 Nervous control of cilia in Amphioxus Anomalous atmosphoric refraction (Branchiostoma) at sea ... Note on the anomalous refraction observed by taking astronomical sights, and description of the use of polaroids to correct the refraction. GLK:tl GLK Nanncy, C.A. (1958) - 580221 Kisch, B.S. (1958) 580218 Naturo, Lond., 181:802-3 Nature, Lond., 181:206-7 Balanus tulipiformis Ellis on the Possible correlations between Atlantic coast of France and an oarthquakes and microseisms unusual situation for B. amphitrite Darwin General discussion on the possibility of correlating changes in the A communication on the occurrence of microscism frequency with carthquakes, the species and possible correlation with omphasis on the correlation between the microscism directions and of the presence of B. amphitrite with turbidity of water. the carthquake azimuths. GLK: hr GLK:tl M M . Croutzberg, F. (1958) Gholardi, R.J. & W.J. North (1958) 580219 Nature, Lond., 181:857-8 Nature, Lond., 181:207-8 A possible ecological effect of up-Uso of tidal streams by migrating clvers (Anguilla vulgaris Turt.) wolling in a submarine canyon Note on the influence of bottom Observations in the Netherlands based currents on the abundance and species on catches made during flood and ebb composition of benthos. tides. GLK:tl GLK: wad MF

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Cancer Chlorella CIRRIPEDIA Clupeonella COELENTERATA COPEPODA CRUSTACEANS, GE	.		580043 580065 580036 580046 580011 580032 580011
Delphinus DINOPHYCEAE		580044	580056 580064
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SEA AREAS

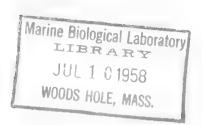
Atlantic, South East

Atlantic, North East

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Viale delle Terme di Caracalla, Rome, Italy



CURRENT BIBLIOGRAPHY FOR FISHERIES SCIENCE

prepared by
Biology Branch, Fisheries Division

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Romo, June 1958

1(2):T1-2; G1 1(3):1-82; A1-5

(containing:

geographic classification, taxonomic and geographic

indexes to 580223-580714 references, and author index

to, 580510-580696)



Explanatory notes

(The following notes are additional to those accompanying the first two issues of this Bibliography.)

- 1. With this issue we have started to include references to documents published in 1957 which are currently being received and indexed at FAO. These references are distinguished by the year '1957' in parentheses following the author's name, but the serial number for them will nevertheless always begin with the digits '58'. We already have in our files annotations for about 2,000 references to 1957 publications and these will be published separately towards the end of this year as a supplement to this Bibliography, which should then be as near complete as possible for the years from 1957 onwards.
- 2. On page 1(3):52 you will notice that reference number 580533 extends on to two rectangles and that the next rectangle carries the number 580535. Number 580534 is omitted in order that the pages shall carry numbers in even multiples of six. Normally every attempt will be made to keep references and annotations to a length that can be typed in one rectangle but sometimes, especially with long titles which have to be translated, this is not practicable and the annotation must run on to a second rectangle.
- 3. A word of explanation is necessary regarding the monthly indexes. For the author index, the pages of which are designated by the prefix 'A', the rules of the American Library Association are followed for alphabetic order, and cross references are given to second and third authors of joint papers. If there are more than three authors, the convention 'et al' is used and no cross references given.

The pages of the taxonomic index are designated by the prefix 'T'. Scientific names down to genus are given in strict alphabetic order with initial capitals in the case of genus, underlined for families, and all capitals for orders and above. The names indexed are in most cases those given in the original document but gradually, as our taxonomic codes are completed, a standard name will be adopted for each genus for the purpose of the index. As far as possible this standard name will be the taxonomically valid name. The code we are using for the taxonomic index will be published later as a supplement.

The codes we are using for the geographic index are given as a supplement to this issue. The arrangement of the index is systematic rather than alphabetical, the first part being for land areas, the second for sea areas. When all the codes are complete, including the subject classification which is at present being developed, it is our intention to issue them all as a

separate manual for use with the Bibliography, together with a compilation of these explanatory notes.

Errata

580095 Tenca should read: Tinca
580135 Angiulla " " Anguilla
580189 diclidophoridae " " Diclidophoridae
580194 Insert 'M' in bottom right corner.

The corrections above are for errors we have found whilst indexing the first two issues of the Bibliography. Would anyone finding others that we have overlooked please let us know by postcard.

Current Bibliography for Fisheries Science

GEOGRAPHIC CLASSIFICATIONS

The classification of main land areas and the English names of states are based upon "Nomenclature of Geographic Areas for Statistical Purposes", U.N.statist.Pap.Ser.M(1), 1949. The boundaries of sea areas shown on the map, page 16, represent a compromise for bibliographic purposes between natural and political criteria. Sub-divisions of land areas and seas are similar to, but do not exactly correspond with, those given in the FAO "Yearbook of Fishery Statistics", Vol.6, 1955-56.

The following abbreviations are used throughout: Am. = American (U.S.A.); Austr. = Australian; Belg. = Belgian; Br. = British; Fr. = French; Neth. = Netherlands; N.Z. = New Zealand; Norw. = Norwegian; Port. = Portuguese; Sp. = Spanish; S.A. = South African; B. = Bay; G. = Gulf; I(s) = Island(s); L. = Lake; N. = North; S. = South; E. = East; W. = West.

Land Areas Code - Key to first digits

(For Alphabetic Index, see pp.7-14; for Water Areas Code, see pp.15-16)

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- 2 N. AMERICA
- 3 LATIN AMERICA (S. and Central America)
- 4 ASIA (excl. U.S.S.R.)
- 5 EUROPE (incl. Asia Minor; excl. U.S.S.R.)
- 6 OCEANIA
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432	Thailand	531	Ireland
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434	and Keeling Is./ Indonesia. Port. Timor	540	Southern area
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ANW Atlantic, N.W.:

Baffin B., Davis Strait, Hudson
B., G. of St. Lawrence, G. of
Maine, Chesapeake B., B. of
Fundy

ANE Atlantic, N.E.:

White Sea, Barents Sea, Greenland Sea, North Sea, Baltic Sea,
G. of Bothnia, G. of Finland,
English Channel, Irish Sea,
Norwegian Sea

AS Atlantic, S.

ASW Atlantic, S.W.:
G. of Mexico, Caribbean Sea

ASE Atlantic, S.E.:

B. of Biscay, Mediterranean
Sea (Western and Eastern
Mediterranean; Tyrrhenian,
Aegian, Ionian, Adriatic Seas),
Sea of Marmara, Black Sea, Sea
of Azov, G. of Guinea

I INDOPACIFIC OCEAN

IN Pacific, N.:

Japan Sea, Sea of Okhotsk,

Bering Sea, G. of Alaska,

Georgia Strait

IS Tropical Indopacific

ISW Indian Ocean:
Red Sea, G. of Aden, Persian G.,
G. of Oman, Arabian Sea, B. of
Bengal, Andaman Sea, Mozambique
Channel

ISEW Indopacific, Central:
G. of Thailand, S. China Sea,
G. of Tonkin, E. China Sea,
Yellow Sea, Inland Sea of Japan,
Philippine Sea, Sulu Sea,
Celebes Sea, Java Sea, Molucca

Sea, Banda Sea, Timor Sea, Arafura Sea, G. of Carpentaria, Bismarck Sea, Solomon Sea, Coral Sea

ISE Pacific, S.E.:
G. of California, G. of Panama

P POLAR SEAS

PN Arctic Ocean:

N. Polar Basin, Kara Sea, Laptev
Sea, E. Siberian Sea, Chuckchee
Sea. Beaufort Sea

PS Southern Ocean

PSW Southern Ocean, W.

PSE Southern Ocean, E.:
Great Australian Bight, Tasman
Sea

PSEW S. Polar Seas:
Scotia Sea, Weddell Sea, King
Haakon VII Sea, Ross Sea, Roald
Amundsen Sea, Bellingshausen Sea

L INLAND SEAS AND INTERTERRITORIAL LAKE SYSTEMS

L.11 East African Lakes:
L. Rudolph, L. Edward, L. Albert,

L. Kiyu, L. Victoria, L. Tanganyika,

L. Nyassa, L. Moero

L.21 American Great Lakes:

L. Nipigon, L. Superior, L.

Michigan, L. Huron, L. Erie,

L. Ontario

L.31 L. Titicaca

L.71 L. Ladoga

L.72 Caspian Sea

L.73 Aral Sea

L.74 L. Balkhash

L.75 L. Baikal





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Acholoe			580186	ECHINODERMATA			580174
ALGAE, GEN.	580096,	580120,	580136	Ectocarpus			580090
ATOAT MTOO		580161,		ECTOPROCTA			580204 580191
ALGAE, $MISC$.	500092,	580105,	580143 580144	Elminus Engraulis		580134,	580154
AMPHIBIANS, GEN			580205	Eudactylina		J00134,	580193
Amphinema			580190	Eumetopias			580083
Amphioxus		580194,	580220	Eutropiichthys			580070
Angu i lla		580135,	580222	EPHEMEROPTERA	-001	-00	580078
ANNELIDA			580174	FISHES, GEN.	580081,		580098
ANOMALODESMACEA			580192 580197		5800 99, 580119,	580108, 580120,	580116 580121
ANTHOZOA ARACHNIDA			580174		580130,		580137
Artemia	580072。	580163,	580191		580161,		580181
Ascophyllum		- /	580196	FISHES, MISC.	580077,		580115
Asterias			580149		580117	580118,	580122
Astropecten			580219			580127,	580159
	4 ==		E8014E		580170,	580173	580210
BACILLARIOPHYCE.	4.E' 580091,	580145,	580145 580218	Fu c us		580212,	580174 580196
Balanus Bank ia	500091,	5001459	580088	racas			700170
BRACHIOPODA			580204	Gadus	580126,	580189,	580212
					,		580213
Calanus			580142	<i>GASTROIRICHA</i>			580174
Cambarus			580203	Gobius			580153
Cetengraulis			580154 580174	Gryphaea			580128
CHAETOGNATHA CHORDATES, MISC			580174	Halammohyd r a			580156
Chrysochromuline			580198	Halenchus			580196
CIRRIPEDIA		580197,	580215	Haliotis			580169
Clinocottus			580152	HIGHER PLANTS,			580173
Cliona			580211	HIGHER PLANTS,	MISC.		580117
Clupea			580154 580070	Hypomesus			580135
Clupisoma CNIDOSPORIDIA			580080	Ianthina			580183
Cochlodesma			580192	Idotea			580155
COPEPODA		580092,	580160	INVERTEBRATES,		580096,	
Coregonus			580100			5.80121,	
Crangon		E004.40	580150	•	580137,		
Crassostrea	w. 580081,	580148, 580096,		•		580161,	200171
CRUSTACEANS, GE	580121,			Katsuwonus			580124
		580161,					,
			580181	Lag isca			580186
CRUSTACEANS, MI		580117,	580146	Lampetra			580086
	580150,	580159	580168	$\it Littorina$			580200
america i ca			580174	Mactra			580128
CTENOPHORA CYCLOSTOMATA			580174 580174	Makaira	580109.	580110,	
O L OTHORY OMITTY			700174	2,,000,000 0 1 00		580113,	580114
Delphinapterus			580082			580131,	580133
Diclidophora			580189	Melanogrammus			580126
				Mellita Manatnin			580201 580128
				Meretrix Metapenaeus		•	580094
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MOLLUSCS, GEN.	580120, 580136,	580137, 580171,	580126 580161 580181	Torpedo TREMATODES-MONOGENA TUNICATA	580193 580189 580071
MOLLUSCS, MISC.	58011 7 , 5801 68 ,		580174		
Mytilus		J00140 ₉			
Neanthes NEMATHELMINTHES' NEMATODA NEMERTEA		580131,	580147 580174 580092 580174 580132		
Neothunnus Nereis	9001249	7001319	580141		
Oncorhynchus Ophiura OSTRACODA		580117,	580123 580219 580093		,
Ostrea	580139,	580148,	580211		
Parathunnus Penaeus Perenereis Phocaena		580131,	580132 5800.94 580141 580082 580187		
Pholas PHORONIDEA PLATYHELMINTHES Platynereis POGONOPHORA POLYCHAETA Porcellidium PORIFERA Porrocaecum PROTOZOA		580174,	580204 580174 580141 580089 580185 580165 580174 580082 580174		
REPTIL ES, GEN. ROTATORIA			580205 580174		
Salmo Salvelinus Saprolegnia Sardinops SCUTIBRANCHIATA Sebastes Stylatula SUCTORIA	580085,	580097, 580129 580188,	580085 5801 3 5 580154		
TAENIOGLOSSA Tapes Thais THORACICA THUNNIFORMES Thyrsite's Tigriopus Tinca Tisbe			580197 580128 580164 580188 580096 580093 580166 580095 580165		

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AFŔICA				
Morocco United Arab Rep	ublic	580077	580115	
(Egypt) Union of South	Africa	580108	580091 580122	;
NORTH AMERICA				
Canada British Columbia Newfoundland United States o		580086 580212	580087 580083 580214	
America USA, northweste	_		580117 580123	;
ASTA				
India Ceylon Japan	580071	580069	580072 580116 580134	
EUROPE			580167	
'Iceland Norway Finland Netherlands France	580081 580079	580100 580103	580120 580107 580095 580222 580104	:
United Kingdom (England) German Democrat	580140 580092 580152	580173 580200	580174	
Republic Czechoslovakia			580075 580080	
OCEANIA				
Queensland Hawaian Is. Caroline Is.		580131	580094 580210 580132	
ATLANTIC OCEAN	580109 580112	580110	580111	. :
Atlantic, N.W. B. of Fundy Atlantic, N.E. North Sea Baltic Sea English Channel		580149 580183	580126 580082 580153 580149 580168 580197	

Atlantic, S.W. Atlantic, S.E. Mediterranean	580175	580178	580114 580181 580208
Mediterranean,		580206	
INDOPACIFIC OCE	AN		
Pacific, N. Indian Ocean Indopacific,	580096	580124	580152 580102
Central		580132	580133

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Kingdom.			
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Short notes on the seasonal occurrence of different spp. of fish on the coast of Tokushima and Kochi Prefectures.

Miyadi, D. & T. Habo (1957) 580604

Rec.occanogr.Wks Jap., 12(2):79-86

The relationship between the Inland
Sea of Sete and the open sea. II.

Deposits of melluscan shells in the
Hiuchi-nada and the Bingo-nada

Description of the hydrographic conditions and benthos with emphasis on the shells of molluses.

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Yamada, Y. (1957) 580602

Rec.occanogr.Wks Jap., 12(2):73-6

Report on some groups of sea-weeds
belonging to Rhodophyta (red algae)
collected around Hachijojima and
Mikurajima Islands and also off Tosa
district

Taxonomic discussion of the identification of some spp. of rod algae.

Miyadi, D. & T. Habe (1957) 580605 Recoceanogr. Wks Jap., 12(2):87-92 The relationship between the Inland Sea of Seto and the open sea III

Description of the hydrographic conditions and benthos with emphasis on the shells of molluses.

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Segawa, S. (1957) 580603

Rec.occanogr.Wks Jap., 12(2):77-8

Report on the sea-weeds, especially corallimae found around the Izu-Miyake and Tosa-Kashiwa Islands

Taxonomic description of 4 spp.: (Amphiroa rigida, A. ophodraca, A. crassissima and Corallina pilulifora).

Abe, T. (1957) 580606

Roc.occanogr.Wks Jap., 12(2):93-6

Studies on the fishes whose young are believed to be carried in large numbers by the "Kuro-shiwe"

Description of the distribution of young spp. of Cubicops gracilis, Cypselurus pinnatlbarbatus japonicus, Scombor tapcinocophalus, Trachurus japonicus, Totragonurus cuvieri and Mupus japonicus in the west Pacific.

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Nakai, Z. & al. (1957) 580613

Rec.occanogr.Wks Jap., 12(2):159-96

A proliminary report on the biological survey in the Kuroshio area, south of Honshu, Juno-July 1955

Quantitative distribution of total zooplankton, spp. composition and their quantitative distribution; quantities of different spp. of fish eggs and larvae, and their distribution.

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Watanabo, N. (1957) 580614

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A preliminary report on the occanographic survey in the Kuroshio area, south of Honshu, June-July 1955

Hydrographic data and description of hydrographic conditions.

Oren, 0.H. (1957) 580615 Bull.Inst.occanogr.Monaco, (1102):15 p.

Changes in temperature of the eastern Mediterranean Sea in relation to the catch of the Israel trawl fishery during the years 1954-55 and 1955-56

Invostigations on the possible reasons of increased catches of lizard fish (Saurida grandisquamis), and yellow striped mullet (Upenous moluccensis) by Israeli trawlers in recent years.

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Lundbak, A. (1957) 580616

Dtsch.hydrogr.Z., 10:176-83

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Darbyshire, J. (1957) 580617

Dtsch.hydrogr.Z., 10:184-90

A note on the comparison of proposed wave spectrum formulae. Fr Do

3 wave spectrum formulae are considered. Examples of wave observations in the North Atlantic are given and the Darbyshire formula and the methods of Pierson, Neumann and James are used to hindcast them.

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Dtsch.hydrogr.Z., 10:191-201

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Eigenschwingungen der Grenzfläche zweier

Wassermassen im reibungsfreien Ozean

(Internal waves of great amplitude. I.

Eigen-oscillations of the interface of 2

water bodies in a frictionless ocean).

En Fr

Paper gives a general solution of the system of the 6 homogeneous, partial differential equations describing the eigen-oscillations in a frictionless, 2-stratified ocean without horizontal limitation.

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Food & Agriculture Organization 580667 of the United Nations (1958)
Rep.FAO/ETAP, (721):98 p.

Rapport provisoire au Gouvernement d'Haiti sur les pêches maritimes en Haiti (Provisional report to the Government of Haiti on the marine fisheries of Haiti)

Gives information on marine fishery resources of Haiti, particularly on tuna resources.

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Food & Agriculture Organization 580670 of the United Nations (1958)

Rop.FAO/ETAP, (781):103 p.

Rapport sur la situation des pêches dans les territoires servis par la

Commission des Caraïbes (Report on the state of the fisheries in the territories served by the Caribbean Commission)

Contains generalities on the islands, an analysis of the Caribbean Fisheries; studies of the fishing methods, freshwater fisheries and fish-culture, fishery services, fishery industries, fish marketing; conclusions & recommendations.

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Wiegel, R.L., C.M. Snyder &

moving low pressure area

Trans. Amor. geophys. Un., 39:224-36

Water gravity waves generated by a

Coupled water gravity waves, generated by

a moving low pressure area were studied in a towing tank. Velocities in deep and

shallow water are examined and results

compared with measured speeds of the

waves generated by hurricane "Carol".

J.E. Williams

Food & Agriculture Organization 580668 of the United Nations (1958)

Rep.FAO/ITAP, (754):32 p.
Informe al Gobierno de Venezuela sobre
la evaluación de sus recursos posqueros
marinos (Report to tho
Government of Venezuela on the appraisal
of its marine fishery resources)

A proliminary study of the populations of Sardinella anchovia, with notes on the environment and other spp., (Opisthonema oglinum and Cotongraulis edentulus).

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Food & Agriculture Organization 580669 of the United Nations (1958)
Rep.FAO/NTAP, (780):147 p.

Rapport au Gouvernement du Liban sur la pêche (Report to the Government of Lebanon on fisheries)

Contains a study of the food economy, generalities, description and analysis of the fisheries, studies of landings, preservation and transport of fish, fish imports and conclusions and recommendations.

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well as the gobs are emphasized as ovidence of generated eddies intermittently along free boundary layers of turbulent jet flow.

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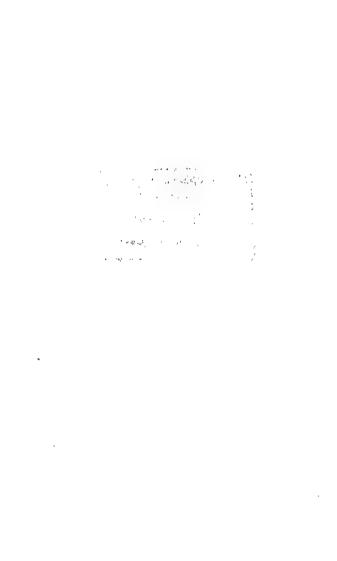
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Rome, July 1958

taxonomic and goographic indexes to 580223-580714 references and author index to, 580715-581182

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Errata

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The corrections above are for errors we have found whilst indoxing the third issue of the Bibliography. Would anyone finding others that we have everlooked please let us know by postcard.



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aggregation using distance methods and

problems of homogeneity and complexity of aggregation patterns in natural

populations are discussed.

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Schaofor, M.B. (1957) 580967 J.Fish.Ros.Bd Can., 14:669-81 Some considerations of population dynamics and economics in relation to the management of the commercial marine fisheries

Discussion of the dynamics of renewable natural resources, considering these as non-self-regulating or self-regulating; an economic model of the fishery is offered and some social and political aspects are considered.

GLK:glk

Frick, H.C. (1957)
J.Fish.Ros.Bd Can., 14:683-6
The optimum level of fisheries exploitation

580968

Discussion of 580967.

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Millor, R.B. (1957) 580969 J.Fish.Ros.Bd Can., 14:687-91 Permanence and size of home territory in stream-dwelling cutthroat trout

Report of tagging operations and of the evidence they yield of movement.

Squires, H.J. (1957) 580970 J.Fish.Res.Bd Can., 14:693-728 Squid, Illex illecebrosus (LeSueur), in the Newfoundland fishing area

Distribution, relative annual abundance, growth, sexual maturity, food and parasites.

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Mills, D.H. (1957) 580971 J.Fish.Res.Bd Can., 14:729-30 Herring gulls and common terms as possible predators of lobster larvae

Stomach contonts of <u>Larus argontatus</u> and <u>Storna hirundo</u>, caught at a time whon lobstor larvae were abundant.

GLK:glk

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Bailey, W.B. (1957) 580972 J.Fish.Ros.Bd Can., 14:731-69 Ocoanographic features of the Canadian Archipelage

Comparison of vertical temperature and salinity structures in Baffin Bay, the Canadian Archipelago and the Arctic Ocean and other aspects of the oceanography of Baffin Bay.

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580976 Alm, G. (1957) 580973 Alm, G. (1957) Vandringsfisk.Modd., (10):3 p. Ostkuston, July 1957:4 p. Växlingarna i gädd- och abborrfångston Laxfisket i Ostersjöområdet under år 1956 (Salmon fishery in the Baltic vid Ostersjökusten (Variations in sea area during the year 1956) pike and perch catches along the Baltic coast) Catch statistics in various countries by size of the fish and by different gear. Distribution of catches by month and year in various fishing districts from 1909-1955, and discussions on the reasons of fluctuations in catchos. MF TLatl MFTL:tl Alm, G. (1957) 580977 580974 Puko, C. (1957) Vandringsfisk. Medd., (11):10 p. Fisko, (5):15 p. Vad ator fisken? (What does the fish Naturdammsundersökningar nr 11 oat?) Laxodlingen i naturdammar i nedre Norrland år 1957 (Investigations on Popular review of the flora and fauna natural ponds no. 11 - Salmon of the fresh water (including plankton), culturo in natural ponds in Lower and the selection and preference of Norrland in the year 1957) different kinds of food by different spp. Qualitative and quantitative results of rearing of salmon fry in four natural ponds and discussion of the reasons for varying results in different ponds. TL:tl F TL:t1 F 580978 Teal, J.M. (1957) Puke, C. (1957) 580975 Vandringsfisk.Modd., (7):8 p. Mcol.Monogr., 27:283-302 Försöksuppfödningen av utvandringsfärdiga Community metabolism in a temperate laxungar vid Statens fiskodlingsanstalt cold spring i Alvkarloby 1954-1956 (Exporimental A study in terms of energy flow. Tho rearing of salmon smolt in Alukarleby flow through the larger animal hatchery 1954-56) populations being studied in detail; the respiration of these animals was Notes on growth and mortalities of the

measured and photosynthesis and

studied as was also the relative

importance of various spp.

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respiration of micro-organisms was

determined. Non-predatory mortality was

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fry in various years.

Bornard, F. & C. Bertoldo (1958) 580979

Bull.Inst.océanogr., Monaco, (1110):30 p.

Etudo, jour par jour, de la fertilité
marino élémentaire à l'extérieur du port
d'Alger (Day by day study of basic
marine fertility outside the port of
Algiers)

In

A study of the effects of meteorological and nutrient changes on production of phytoplankton.

(Card 2) in the following environments: pools, clusters of sea Phanorogams, and polygenetic sediments.

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Brouardol, J. & J. Vernet (1958) 580980
Bull.Inst.océanogr., Monaco, (1111):34 p.
Recherches expérimentales sur la variation en Méditerranée, de la teneur en exygène de l'eau au proche voisinage des sédiments (Experimental research in the Mediterranean en the variation of exygen content of the water close to the sediments). En

In the Moditerranean sea, at least in the areas where there is no permanent current, the cone. of dissolved exygen is reduced close to the sodiment. The experiments have shown that the phenomenum is physico—chemical, but of organic origin.

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Vernet-Cornubert, G. (1958) 580983
Bull.Inst.occanogr., Monaco, (1113):52 p.
Biologic générale de Pisa tetraodon
(Pennant) (General biology of Pisa tetraodon (Pennant)). In

A study of the taxonomy, varieties, brooding, ecology, migration, reproduction, development, moulting, growth, external sexual characters and life cycle of the sp.

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Blanc-Vernot, L. (1958) 580981
Bull.Inst.océanogr., Monaco, (1112):45 p.
Los milioux sódimentaires littoraux de la
Provence occidentale (côte rocheuse).
Relation entre la microfaune et la
granulométrie du sódiment (The
littoral sedimentary medium of
the western Provence (rocky coast).
Relations between the microfauna and the
granulometry of the sediment). Im

A study of sediments taken at depths varying from 0 or a few inches (pools) to 229 or 262 feet (circumlittoral zone). The data of the microfauna & the granulometry of the sediment permitted the definition of chief ecological factors

Pérès, J.-M. (1958) 580984
Bull.Inst.océanogr., Monaco, (1115):21 p.
Trois plongées dans le canyon du Cap
Sicié, effectuées avec le bathyscaphe
F.N.R.S. III de la marine nationale
(Three dives in the Canyon of Cape Sicié, made with the bathyscaph F.N.R.S. III of the National Navy). En

An illustrated account of the observations made near Toulon of the benthic and pelagic fauna, and the layer of water immediately above the bettom.

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Fisk, L. (1958) 580 Outd.Calif., 19(2):1,7,15 Tests of new bypass device show runs be preserved Popular account of an experimental fray of the vertical buffle type design to pass salmen, steelhead, striped by shad and sturgeon.	ish- gnod	Richmond, N.D. (1958) Copcia, (1):41-3 The status of the Florida snappir turtle Chelydra oscoola Stejnogor Discussion of shell characters, external features, and skeletal structure.	
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Rechnitzer, A.B. & J. Böhlke (1958)586 Copcia, (1):10-5 Ichthyococcus irregularis, a new Gonostomatine fish from the Mastern Pacific Illustrated taxonomic description, wiregression of interorbital length on standard length allometric; distributand relationships.	ith	Rosenblatt, R.H. (1958) Copoia, (1):52-4 The status and synonymy of the or Pacific cel Ariosoma gilberti (0g Examination of new material, measurement of holotype, and disc of validity of past conclusions of significance of various character differences.	cussion on the
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Strawn, K. (1958) 580 Copcia, (1):16-22 Life history of the pigmy seaherse, Hippocampus zosterae Jordan and Gilberat Codar Key, Florida Sex ratio, breeding season, contents evaries and brood pouches and frequence of breeds, growth, sexual maturity at number of generations a year, longer	of n c y nd	Bigolow, H.B. & W.C. Schroeder (1958) Copcia, (1):54-5 A large white shark, Carcharodon carcharias, taken in Massachusett Note on a capture in 1957 and of provious captures.	580990
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Doublor, E.H., Jr. & W.E. Fahy (1958) Copcia, (1):55 A reversed ambicolorate summer fl Paralichthys dentatus	580991 .oundor,	Groy, M. (1958) Copcia, (1):56-7 Second specimen of the bathypelag Photostylus pycnoptorus	
Notes on external features.		Description of specimen in US Nat Museum.	ional
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Hoose, H.D. & C.O. Berglund, Jr. (1958) Copoia, (1):55-6 Coloration in Toxas hogehokers, Imaculatus fasciatus Description of a typical colorles		Houck, W.J. (1958) Copeia, (1):57 Another record of the agenid Beth swani from California Description and some observations behaviour.	
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Hubbs, C.L. (1958) Copcia, (1):56 Position of anal fin and length of cavity in catostomid and cyprinic Discussion of the evolutionary artaxonomic significance of this character.	d fishos	Hubbs, C. (1958) Copcia, (1):57-9 Fortility of F1 hybrids between to percid fishes, Etheostoma spectabe. L. lepidum Discussion of hybrid fertility; geographic range of the crossed states description of crosses made and rof viability of offspring.	ile and
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Review of 570150.	25	The physiology of fishes. I. Met Review of 570207.	STOOTTSIII
Hocht, M.K. (1958) Copcia, (1):60-1 Vortobrates of the United State	580998	Walters, V. (1958) Copeia, (1):62-3	581001
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Notice of preoccupied names.		Roview of 580999.	
Böhlko, J.E. (1958) Copcia, (1):59 Substitute names for Nystactes and Lucaya Böhlke, preoccupied	580997 Böhlko	Gordon, M.S. (1958) Copcia, (1):61-2 The physiology of the pituitary fishes	581000 gland of

Pintlor, H.E. & W.C. Johnson (1958)5810 Calif. Fish Game, 44:91-124 Chemical control of rough fish in the Russian river drainage, California Description of the water basin, its fill fisheries; large-scale use of rotened to control unwanted spp. with aim of improving fishery for Salmo g. gairdneeds incurred & evaluation of results	Calif. Fish Game, 44:161-70 Amphipod crustaceans as fouling in Los Angeles - Long Beach hard with reference to the influence water turbidity Experimental study of settling amphipods, polychaetes, tunicate	of sca- of sca- of sca- in fouling by ideration themont
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Walos, J.H. (1958) Calif. Fish Game, 44:125-36 Two new blood fluke parasitos of trout Epizootic in Salmo g. gairdneri and S. kamloops in 1955 at Darrah Spring Hatchery, California, traced to Sanguinicola davisi & S. klamathensis. Descriptions of these digenetic trematodes, & role of snails Oxytroma & Fluminicola spp. in their life-histories, suggested control methods.	Calif.Fish Gamo, 44:171-4 Albinism and ambicoloration in California halibut (Paralichthy californicus) Ill. doscription of 2 unusual s	s po ci mons
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Rosenblatt, R.H. & W.J. 5810 Baldwin (1958) Calif.Fish Game, 44:137-59 A review of the eastern Pacific sharks of the genus Carcharhinus, with a redescription of C. malpeloensis (Fowler and California records of C. remetus (Duméril) Incl. morphometric data; ill. key to the genus.	Calif.Fish Game, 44:199-200 Soa fisheries: their investigation the United Kingdom	h tho
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Wolf, H. (1958) Calif.Fish Game, 44:200 The physiology of the pituitary glishes Review of 580999.	581009	Trautman, M.B. (1957) Ohio St. Univ. Press & Ohio Div. Wildl., St. Univ. Developm. Fund, 683 p. The fishes of Ohio Ill. original study & review of literature. General geography of the State, changes in ocological conditions, (especially 1750-1800) names & spp. & sub-spp., with description & keys; growth sizes, distribution & habitat of each sp.
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Eddy, S. (1957) Wm.C. Brown Co., Dubuque, Iowa, 25 How to know the freshwater fishes	581010 54 p•	Kelloy, D.W. (1958) 581013 Calif.Fish Game, 44:204 The fishes of Ohio Review of 581012.
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Kimsey, J.B. (1958) Calif.Fish Game, 44:203-4 How to know the freshwater fishes Review of 581010.	581011	Pollak, M.J. (1957) 581014 Trans.Amor.goophys.Un., 38:62-4 Axial slope of sea level in Chesapeake Bay The north-south variation in axial slope of monthly mean sea level in Chesapeake Bay was investigated by means of tide-gage records. Data from three stations indicate a marked similarity between axial slopes over the northern & southern halves of the bay.
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King, J.M. & T.S. Hida (1957) 581015 Fish.Bull., U.S., (118):365-95 Zooplankton abundanco in the Contral Pacific. II

Notes on the instruments and methods used description of the environment; distribution of zooplankton & its diurnal migrations, & seasonal variations in abundance & the relations between phosphate. zooplankton & tuna.

Wundsch, H.H. (1957) Z.Fisch., 5:487-504

581018

Dio Organisation der fischereiwissenschaftlichen Forschung und Arbeit in der Doutschen Demokratischen Republik (The Organization of fishery scientific research and work in the German Domocratic Republic)

Address to 3rd Conference of German Limnologists in the International Association for pure and applied limnology.

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Abrosov, V.N. & I.D. Agapov (1957) 581016 Vop. Ikhtiol., 8:160-78

O samoreguliatsii chislennosti snetka v Zhizhitskom czoro (Concorning solfregulation of numbers of smelt in the Zhizhits Lake)

Brief account of the characteristics of the lake; observations on spawning, fooding, etc., of the smolt in this lake, size of the population of smelt and intensity of its exploitation.

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Wundsch, H.H. (1957) Z.Fisch., 5:505-12

581019

Geologie des Müggelsees und der Gowässer der Oberspree (Geology of Müggel Sce and the waters of Oberspree)

General geographic and topographic introduction for the use of the excursionists at the 3rd Conforence of German Limnologists in the International Association for puro and applied limnology.

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Wundsch, H.H. (1957)

Z.Fisch., 5:481-5
Boricht über die dritte Tagung der Doutschen Limnelogen in der Internationalon Vereinigung für theoretische und angewandto Limnologic (Report of the 3rd Conference of German limnologists in the International Association for pure and applied limnology)

Müller, H. (1957)

Z.Fisch., 5:513-5 Storkower See und Scharmützelsee (Storkower See and Scharmützel See)

Brief description for the use of the excursionists at the 3rd Conference of German limnologists in the International Association for pure and applied limnology.

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Kirchberg, E. (1957) 581021 Z.Fisch., 5:517-23 Die "New Jersey Mosquito Light Trap" als Hilfsmittel der limnologischen Forschung (The "New Jersey Mosquito Light Trap" as useful instrument for limnological research) Description of the apparatus and of results obtained in using it to investigate insectan fauna of inland waters.	Bauch, G. (1957) 581024 Z.Fisch., 5:539-47 Norddoutsche, "fischereilich cutropho" Flachseen (North German, "fishery eutrophic, shallow lakes) Discussion of the characteristics and classification of these lakes.
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Fittkau, E.J. (1957) 581022 Z.Fisch., 5:525-9 Ein neuartiger Wasserschöpfer (A now type of watersampler) Description of the apparatus of which the side is a flexible rubber membrane.	Morawa, F.W.F. (1957) 581025 Z.Fisch., 5:549-51 Fottgehalts- und Gewichtsschwankungen bei Fischen (Variations in fat content and weight of fish) Preliminary account of investigations on Coregonus albula L., Perca fluviatilis L. and Lota lota L.
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Elstor, HJ. (1957) 581023 Z.Fisch., 5:531-7 Einigo Gedankon zum weiteren Ausbau des Sectypensystems (Some thoughts on broader extensions of lake-type systems) Discussion of classification systems and of the criteria on which these are based.	Scidol, K. (1957) 581026 Z.Fisch., 5:553-67 Scirpus lacustris im cutrophen Sco (Scirpus lacustris in cutrophic lakes) General picture of Scirpus in these situations, its biology, and discussion of the ecological and economic significance of the sp.
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Harnisch, O. (1957) Z.Fisch., 5:569-71 Boobachtungon am Fettkörper der Chironomus-Larven bei Anaerobiose (Observations on the fat bodies Chironomid larvae under anaerobic conditions)	in	Tosch, F.W. (1957) Z.Fisch., 5:593-606 Percidenwachstum in cutrophen nor doutschen Flachseen (Perceid in cutrophic North German shallow Age determination, by scale readiperca fluviatilis L. and Luciepersandra Cuv. and L.	growth lakes)
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Utermöhl, H. (1957) Z.Fisch., 5:573-5 Hydrobiologic mittelamerikanische Flachseen und Limnelogische Untersuchungen an Maaren El Salvaders (Mittelamerika) (Hydrobiological American shallow lakes, a limnelogical investigations of Calakes in El Salvader (Central American American Salvader (Central American Salvader (Cen	r- y of and rator	Woynarovich, J. (1957) Z.Fisch., 5:607-15 Zur Frage der Jinführung von Tier Fischnahrung, vom produktiensbiel schen Standpunkt aus betrachtet (On the question of the introduct animals as fish-food, considered the viewpoint of production biele Ceneral discussion.	ogi-
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Schiomonz, F. (1957) Z.Fisch., 5:581-91 Die Flachheit als entscheidende für die Bigenart eines Sees ness as a critical cause of the individuality of a lake) Discussion of the characteristic Steinhuder Meer and of the consecto its metabolism and general econofits shallowness.	(Shallow- s of quences	Thomson, J.M. (1957) Fish.Bull.W.Aust., (8):8 p. The size at maturity and spawning of some Western Australian estuar fishes Data on place, age and size of material fector of the size of	turity, of ova,
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Portugal. Comissão Contral 581033 de Poscarias (1957)

Ministório da Marinha, Lisboa, 57 p.

Estatística das Pescas Marítimas no continente e ilhas adjacentes no ano de 1954 (Marine Fisheries Statistics for the continent and adjacent islands in 1954)

Production of fish, molluscs, crustaceans and cetaceans by spp., months, area and method of capture; vessels constructed and operating; number of fishermen employed. Incl. data for brackish waters.

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Borrit, G.R. (1958) 581036
Bull.Com.contr.Océanogr., 10:335-58
Los saisons marines à Pointe-Noiro
(Marine seasons at Pointe-Noire)

Description of movements of water masses in the region east of the Gulf of Guinea; general characteristics of the seasons at Pointe-Noire and comparison of the conditions prevailing in 1953 to 1957.

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Nieviessky, E.N. (1958) 581034 Bull.Com.centr.Océanogr., 10:309-23 Etude des sédiments marins litteraux à l'aide du tube à pisten vibreur (Study of litteral marine sediments by means of a tube with vibrating pisten)

Description of the apparatus; account of results obtained from use of the apparatus in the Black Soa with special reference to evidence on changes in sea level in this basin.

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Danforth, W.C. & C.A. 581037 Theodore (1957) Spoc.sci.Rop.U.S.Fish Wildl.Sorv., (241): Hull insurance and protection and indemnity insurance of commercial fishing vessels

A comprehensive review; valuation, & study of risks by sampling. Gives data on age, size, power & value of U.S. craft, possession of navigation & safety equipment etc.; variations of insurance with type of gear, fishing period, ground werked.

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Saint-Guily, B. (1958) 581035
Bull.Com.centr.Océanogr., 10:324-34
Mouvements radiaux de Hamel en presence
d'une force de Coriolis (Hamel's
radial movements in the presence of
Corioli's force)

Mathematical treatment and examination of certain occanic currents, in particular of counter-currents and multiple veins in the Gulf Stream, as being analogous.

Pirilä, V. & Bo-J. Wikgron (1957) 581038 Acta derm.-venereel., Stockh., 37:140-8 Cases of swimmer's itch in Finland

Notes on the distribution of <u>Cercaria</u> occilate and <u>Bilharziella</u> polonica in Scandinavian lakes. Clinical picture of the swimmer's itch, the causative agents and the life history of schistosome trematodes are described.

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Sastry, C. Anandeswara & al (1957) 581040 Curr.Sci., 26:53-4 Extent of removal of amine acids from sewage during treatment by different methods	Srivastava, P.N. (1957) 581043 Curr.Sci., 26:149-50 Features of anatomical interest in the alimentary canal of Chirocontrus dorab (Forskal) Study throws light on the systematic relationships of the Chirocontridae.
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Banorjoe, V. (1957) 581041 Curr.Sci., 26:58-9 Morphology and coagulation time of the blood cells of Hetorephoustes fossilis (Bloch) Counts and cytology of red and white corpuscles in this fish; effects of starvation; comparison with O. punctatus.	Subrahmanyam, C.B. (1957) 581044 Curr.Sci., 26:155-6 Rolationship between the body weight and the oxygen consumption in Emerita asiatica (Milno idwards) Comparisons of results from study of this Madras sand crab with other crustacea.
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Anenymous (1057) Curr.Soi., 26:172 Sea-going cosmic-ray observatory	581045	Ramaseshan, S. (1957) Curr.Sci., 26:267-70 The International Goophysical You	581048 ir
Note on IGY program using Swedish morehant vessel LOWILARLY on route Sweden-S. Africa.		General account of program and of contribution to be made by India, occanographic observations at constations.	incl.
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Vonkataraman, G.S. (1957) <u>Ourr.Sci.</u> , 26:180-1 A statistical study of a form of Wollon bharadwajae Singh Taxonomy of samples of this alga Banaras.		Volankar, N.K. & T.K. Govindan (1957) Curr.Sci., 26:285-6 Free n-amine soid nitrogen center the skeletal muscle of seme marin fishes and invertebrates Gives values for spp. of Sceliede Sphyrna, Hilsa, Chirocontrus, Tyl Sphyrcana, Scemberemerus, Pampus, Decapterus, Caranx, Dropane, Scat Meptunus, Penaeus and Hemarus.	on, Losurus,
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Rao, B.S. Madhava (1957) Curr.Sci., 26:312-3 The Indian ophemeris and nautical	581051	India. Ministry of Food & Agriculture (1957) Indian Fisherics Bulletin, 4(1):	581054 36 p.
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Anonymous (1957) Curr.Sci., 26:333 Pearl culture in Australia A brief note on methods used.	581053	Kühl, H. & K. Tiows (1957) Bor. ittoch. Komm. Hoprosfarsch., 150 Untersuchungen über die deutsche "Olheringsfischerei" in der Nord Jahre 1956 (Investigations of German "Oilherring" industrial if fishery in the North Sea during year 1956). In Fishing grounds, fishing fleet & ports, course of the fishery, co of the catch by size and spp., a catches.	(1) 158-69 elsee im on the herring the k landing mposition
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Strøm, K. (1958) Nature, Lond., 181:1360-1 A treatise of limnology	581058	Garrod, D.J. & B.S. Nowell (1958) Naturo, Lond., 181:1411-2 Ring formation in Tilapia esculon	
Roview of 581057.		Study of samples from L. Victoria relation between ring formation a calcium content of scales and ova at various stages of gonad matura	nd ries
GLK :	F	GLK:sjh	F
Baor, J.G. (Ed.) (1957) Inst.Zool.Univ. do Nouchatel, 3 First symposium on host specificamong parasites of vertebrates Incl. papers on evolution of fit host-specificity of various groparasites.	city shos;	Green, J. & R.Phillips Dales(1958 Nature, Lond., 181:1412-3 Biliverdin in the eggs of Nereis Nature of blue pigment in eggs of polychaete living in shells carrithe hermit-crab Eupagurus bernhar English Channel. Lists its occurralse in cirripede Septesaccus, an N. diversicolor.	fucata this od by dus in onco
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The state of the s	
Williamson, M.H. (1957) 581063 Nature, Lond., 180:422-5 An elementary theory of interspecific competition Definition & analysis of competition between animals, and of population controlling factors; properties of certain theoretical models of population interaction.	Dehnel, P.A. (1958) 581066 Nature, Lond., 181:1415-7 Effect of photoperiod on the exygen consumption of two species of intertidal crabs Reports controlled experiments with Hemigrapsus nudus & H. orogenensis, on Canadian Pacific Coast, under variety of conditions of temperature & salinity.
GLK:sjh MF	GLK:sjh M
Andrewartha, H.G. & T.O. 581064 Browning (1958) Pature, Lond., 181:1415 Williamson's theory of interspecific competition	Brown, S.G. (1957) 581067 Mar. Obs., 27(177):157-64 Whales observed in the Indian Ocean. Notes on their distribution
A criticism of 581063.	Records of whalos observed at sea by merchant ships & other vessels.
GLK:sjh . MF	FAO:hr M
Williamson, M.H. (1958) 581065 Nature, Lond., 181:1415 Williamson's theory of interspecific competition An answer to 581064.	Huet, M. (1957) Trav.Sta.Roch.Groonendaal, D(22):109 p. Dix années de pisciculture au Congo belge et au Ruanda-Urundi. Compte rendu de mission piscicole (Ten years of fishculture in the Belgian Congo and at Ruanda-Urundi. Account of the fisherics mission)
	Considers the present development and problems of fishculture, and reviews those, particularly for the fishculture in the Congo.
GLK:sjh MF	GLK: hr MF
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FAO:glk M	FAO:sjh MF
Individuals of several spp. were tagged and recaptured repeatedly; underwater observations were made of their behaviour and notes made of the extent of their movements.	Description and test use of apparatus based on property of solution of anthracene in benzone to form insoluble polymer on exposure to sunlight.
Bardach, J.E. (1958) 581071 Ecology, 39(1):139-46 On the movements of certain Bermuda	Dore, W.G. (1958) 581074 <u>Ecology</u> , 39(1):151-2 A simple chemical light-meter
FAO:glk F	FAO:glk MF
Reed, E.B. & J.R. Olive(1958) 581070 Ecology, 39(1):66-74 Altitudinal distribution of some entomostraca in Colorado 98 lakes were sampled; they are classified and the occurrence of copepods & cladocerans in them is recorded; the interaction of climatic, morphometric and edaphic factors in relation to altitudinal zones and entomostracan distribution are discussed.	Blackith, R.E. (1958) 581073 <u>Heology</u> , 39(1):147-50 Nearest-neighbour distance measurements for the estimation of animal populations The relation between density and the nearest-neighbour distances with results of experiments with grasshopper populations, and discussion of the effects of non-randomness.
FAO:glk F	FAO:sjh MF
Description of study area, and of methods; study of relations with salinity and ion gradients and of distributional interrelations of spp.; a summary of distribution.	Mathematical proof that there always exists a stationary age distribution for a population in which birth and survival rates are continuous functions of the age distribution, such that the total size of the population always remains within finite limits.
Whittaker, R.H. & C. Warren 581069 Fairbanks (1958) Ecology, 39(1):46-65 A study of plankton copepod communities in the Columbia basin, southeastern Washington	MacArthur, R.H. (1958) 581072 Ecology, 39(1):146-7 A note on stationary age distributions in single-species populations and stationary species populations in a community

Triedcrichs, K. (1958) Ecology, 39(1):154-9 A definition of ecology and some thoughts about basic concepts	581075	Rao, K. Pampapathi (1958) Curr.Sci., 27:99 Salinity tolerance of Etroplus r (Bloch)	581078
Discussion of the meaning of 'cco 'sociology', 'community', 'niche' zones', 'stabiliment', 'organoid' 'holocone'.	, 'life	Exporiments on adaptation of the fresh-water fish to diluted and undiluted sea-water.	is Indian
FAO:glk	MF	FAO:sjh	MF
Henzies, R.J. & C. Beckman (1958) Ecology, 39(1):172 Occurrence of Limnoria tripunctat the Cape Cod poninsula		Agarwal, S.C. (1958) Curr.Sci., 27:107 A new species of the genus Pall: (Acanthocophala)	581079 isentis
Northward extension of known rang	C•	Proliminary description of P. a. n.sp. found in alimentary canal body cavity of 40% of the fish, Ophicophalus punctatus (Bloch), from Allahabad, India.	and
FAO:sjh	M	FAO:sjh '	M
Provost, M.M. (1958) <u>Hcology</u> , 39(1):177-8 Consorving Amorican resources Critical review of original artic	581077	LeVine, H.D. (1957) Health & Safety Lab., New York, Some remarks on instrumentation marine biology research	581080 38 p. for
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Bigda, R.J. (1957) Sci.Amor., 196(6):14-6 Letter to the oditor Letter to the editor about the technical possibilities and costs making freshwater from salt water		Anchymous (1957) J.Cons.int.Explor.Mor, 23(1):7-37 International Fisheries Convention report of the Ad Hoc Committee established at the 4th Meeting of Permanent Commission, September 1 Introduction, terms of reference committee & full text of its report dealing with the principles of fistock assessment; the selectivity effects of mesh regulation & size summary of present knowledge for spp., & recommendations for further research.	the 955 of rt, sh of nets limits; N. Sca
FAO:tl	M	GLK:sjh	M
Llano, G.A. (1957) Sci.Amcr., 196(6):54-61 Sharks v. mon Illustrated review of the species seasonal and geographical pattern records of attacks by elasmobrane men, with account of pertinent unwater observations of fish behavior	n of chos on ndor-	Cox, R.A. (1957) J.Cons.int.Explor.Mor, 23(1):38-4 An improved salinity and density Ill. description of apparatus; it calibration & use; reports test r	motor
FAO:sjh	M	GLK:sjh	M
Desbrossos, P. (1957) J.Cons.int.Explor.Mer, 23(1):3-5 Henri Holdt, 1891-1956 Obituary and short biography.	581083	Woodhead, P.M.J. & J.D. Riley (1957) J.Cons.int.Explor.Mer, 23(1):47-5 The separation of petential males females in stage-V copepodites of Calanus helgolandicus Method described, based on form of proximal segment of urosome. Comp with biemetric separation methods application to N. Sea samples.	and of parison
GLK: sjh	M	GLK:sjh	M

Kipling, C. (1957) J. Cons.int. Explor. Mor, 23(1):50 The offect of gill-net selectic estimation of weight-length relability Comparison of gill-not with sei caught samples of Porca fluviat Salvelinus alpinus willughbii. multiplo-size gill nots.	n on tho ation- no ilis and	Declder, C.L. (1957) J.Cons.int.Explor.Mer, 23(1):83-8 On the growth of cels in the IJss Length frequencies and otelith st of male Anguilla vulgaris; variab of growth.	olmoor udios
GLK:sjh	MF	GLK:sjh	MF
Margetts, A.R. (1957) J.Cons.int.Explor.Mor, 23(1):64 The length-girth relationships whiting and cod and their appliment solution Reports measurements of N. Sea of both natural and constricted considers various aspects of the relation between fish and mesh	cation to catches, girth;	Twomey, E. (1957) J.Cons.int.Explor.Mer, 23(1):89-9 Salmon of the river Shannon (1952) Strengths of runs, age distributifrom scale samples.	-1 956)
GLK:sjh	M	GLK:sjh	MF
Salzen, E.A. (1957) J.Cons.int.ixplor.Mer, 23(1):72 A trawling survey off the Gold Catches per hour and their haul variability, by species, depth, locality; comparison with other implications of results to deve of industry.	to haul and areas;	Darbyshiro, J. (1957) J.Cons.int.Explor.Mer, 23(1):97-8 Slopes of the sea surface deduced photographs of sun glitter Review of original article with title by Cox, C. & W. Munk, 1956, Bull.Scripps Instn Oceanogr., 6(9)	he same
GLK:sjh	M	GLK: 1(4):63	M

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M	guola	M	with the	M .	orman, gr.Z.,	- 9
GLK.	Went, A.H.J. (1957) J.Cons.int.Explor.Mor, 23(1 Movements of salmon and sea chiefly kelts, and of brown in the Tweed between Januar 1937 and 1938 Review of original article title by Nall, G.H., 1955, Fish.Res., 10:1-19.	GLK:	Steven, G.A. (1957) J.Cons.int.Explor.Mor, 23(1 Some aspects of the schooli of fish Review of original article title by Keenleyside, M.H.A Behaviour, (8):183-248.	GLK:	Review of original article title by Hardy, A.C., 1956, London, 103 p.	Braarud, T. (1957.) J.Cons.int.Explor.Mor, 23(1) The open sea: its natural h world of plankton
F	trout tagged y and May,		ng bohaviour	M .		

Went, A.E.J. (1957) 581099

J.Cons.int.Explor.Mcr, 23(1):106-7

Fish population analyses in some small

Danish trout streams by means of D.C.

cloctro-fishing (with special reference
to the population of trout (Salmo trutta
L.))

Review of original article with the same title by Larson, K., 1955, Medd.Danm. Fisk., N.S., 1(10):1-70.

Chiba, K. & Y. Ohshima (1957) 581102

Bull.Jap.Soc.sci.Fish., 23:348-53

(Affect of suspending particles on the pumping and feeding of marine bivalves, especially of Japanese neck-clam). Ni En

Rate of pumping measured by Jørgensen's method, of feeding by weighing driod fees; effect on these rates of bontonite concentration studied in Venerupis semidecussata, Mercenaria meretrix, Ostrea gigas & Mutilus edulis.

GLK:

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Waugh, G.D. (1957) 581100

J.Cons.int. xplor.Mor, 23(1):107

Persistent daily, monthly, and 27-day cycles of activity in the oyster and quahog

Roview of original article with the same title by Brown, F.A. & al., 1956, J.oxp. Zool., 131(2):235-62.

Isouti, N. & T. Kawakami (1957) 581103

<u>Bull.Jap.Soc.sci.Fish.</u>, 23:354-7

(Mochanical characteristics of plate depressors for trolling). Ni En

Tank experiments with a variety of designs of depressor; comparison of results obtained with expectation from hydrodynamic theory.

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Iitaka, Y. (1957) 581101 Bull.Jap.Soc.sci.Fish., 23:344-7 Study on the fishing capacities of purse seines - III. On the difference between cotton and Kyokurin purse seines

Comparison of daily sardine catch statistics from the sea of Hyûga for 2 fishing centres, Simanoura & Kadogawa, before & after nets made of the artificial fibre (mixture of Saran & Nylon) were introduced in the former place in 1956, shows increased efficiency of otherwise similar gears.

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Matsue, Y., T. Endo & 581104

K. Tabata (1957)

Bull.Jap.Soc.sci.Fish., 23:358-62

(Iffect of an insecticide, parathion, on aquatic animals in the lower range than its lethal concentration). Ni En

Toxicity of diethyl-para-nitrophenylthiophato in a range of concentrations, to <u>Carassius auratus</u> & <u>Oryzias latipos</u> over a period of a month. Effect on growth & food consumption, & on gill & fin movements.

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Kotake, N. & M. Kawamura (1957) 581105 Bull.Jap.Soc.sci.Fish., 23:363-5 (Studies on the culture pearls with Pinctada martensii - I. Notes on the natures of pearls, operated by the different types of mantle-piece).

Ni

Studies of pearl quality resulting from mantle implants of various shapes & sizes showed pearls of good quality appeared most frequently when small square pieces are used.

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water temperatures.

Hirayama, N. (1957)

long-line).

proposed.

Bull.Jap.Soc.sci.Fish., 23:373-5

On the school of yellow-fin tuna,

Ni

Neothunnus rarus (K.), being supposed

from the distribution of catch on tuna

The distribution of catch on tuna long-

line is analysed and the configuration

of yellow-fin tuna in its school is

Kotake, N. & M. Kawamura (1957) 581106 Bull.Jap.Soc.sci.Fish., 23:366-7 (Studies on the culture pearls with Pinctada martensii - II. Notes on the formation of 'thin-layered pearl). Ni

Comparative studies on the position of mantle-piece used showed good quality thin-layered product is obtained most often if the piece is sectioned from the middle of the mantle, rather than anterior or posterior regions.

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Uda, M. (1957) 581107 Bull.Jap.Soc.sci.Fish., 23:368-72 A consideration on the long years trend of the fisheries fluctuation in relation to sea conditions

Tabulates information back 5 centuries on periods of fish abundance & scarcity in case of Clupea palamii, Sardinops melanosticta, Tunas & Squids; pleads for treatment of all parameters in equations of population dynamics as functions of environmental factors; considers syncrony & its converse in fluctuations of different stocks, & their relation to indicator groups; relations synchronized fluctuations to similarities in preferred

Kobayashi, K. (1957) 581110 Bull.Jap.Soc.sci.Fish., 23:376-82 (Larvae and youngs of the sablefish, Anoplopoma fimbria (Pallas), from the sea near the Alcutian Islands). Ξn

Description, morphometric study development of 16 specimens taken by OSHORO MARU, 1955 & 1956, in larva net.

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Honda, K. (1957) 5811 Bull.Jap.Soc.sci.Fish., 23:383-7 (On the line disused after tuna longline fishings). Ni En

Changes, with duration of use of line, in diameter flexibility, breaking strength & fatigue for cotton & cremona lines, wet and dry, studied experimentally at Misaki, Kanagawa Prof., Japan.

581111 Kuroki, T. (1957)

Bull.Jap.Soc.sci.Fish., 23:400-4

ng- (Biophysical studies on the auditory characteristic of fish - I. Directional audibility through one lateral line).

inc, Ni In

Experimental study of 20cm Carassius auratus of response to various frequencies & intensities of vibrations. Remarks on the technical aspects of these experiments & the design of suitable aquaria for them.

Yoneda, Y. & Y. Yoshida (1957)

Bull.Jap.Soc.sci.Fish., 23:405-9

(Physiological and ocological studies on

red tide - I. On the vertical migration

of the plankton producing red tide (1)).

Laboratory experiments on Sennia sp.

collocted at Maizuru Bay, Nov. 1955:

offect of light, salinity, pH, 02 and

other factors on its buoyancy; relation

of these effects to the conditions under which red-tide is observed to occur in

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Kurogane, K. & Y. Hiyama (1957) 581112 Bull.Jap.Soc.Sci.Fish., 23:388-93 (Morphometric comparison of the yellowfin tuna taken from the Equatorial Pacific). Ni En

Measurements of Neothunnus macroptorus at Tokyo market, 1953-57 compared for 16 characters lead to tentative conclusion that there are at least 3 populations, with some mixing between them.

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the field.

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Kô, Y. (1957) 581113

Bull.Jap.Soc.sci.Fish., 23:394-8

(Some histological notes on the genads of Tapes japonica Deshayes). Ni Im

Studies of this clam in Sasobo Bay show that it spawns each year in spring & in autumn. Size of maturity determined, & this & date of spawning compared as between wild & cultured stocks.

Onodera, K. (1957) 581116
Bull.Jap.Soc.sci.Fish., 23:410-9
(On the change of fishing effort corresponding to that of types of river).
Ni En

Changes in discharge of R. Dôsigawa, a tributary of the Sagami, caused by construction in 1955 of a dam & waterway permitted study of fishing effort distribution on <u>Plecoglossus altivelis</u>, showing concentration at rapids, & other differences depending on type of river bed.

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Hirano, R. & Y. Ohshima (1957) 581117

Bull.Jap.Soc.sci.Fish., 23:420-2

(Cultivation and preservation methods of marine protozoa). Ni In

Method of cultivating 4 spp. Ciliata & a flagellate, isolated from algae, detritus and sea water in tidal zone, Aburatsubo Bay, Kanagawa. Such free-living organisms can be used as food in rearing larvae of marine animals. Artificial inducement of encystation is also reported.

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Nozawa, K. & Y. Nozawa (1957) 581118

Bull.Jap.Soc.sci.Fish., 23:423-6

(Studies on the protoplasm of algae
III. The correlation between salinity

of sea water and toxicity of ammonium

sulfate to the laver cell). Ni En

Experiments with Porphyra tenera suggest that it does not have much adaptability in chlorinity much different from that of sea water.

Bull.Jap.Soc.sci.Fish., 23:438-40 (Puffer toxin during the embryonic development of puffer, Fugu (Fugu) niphobles (J. & S.)). Ni En

Suyama, M. & Y. Uno (1957)

Kawanabe, H. & N. Mizuno (1957)

different river-beds).

Bull.Jap.Soc.sci.Fish., 23:430-4

(Population density of a salmon-like

Relative accumulation of this sp. on

R. Ukawa, Kyoto, during 1956, with

observations on age differences.

fish, Plecoglossus altivelis, or Ayu, in

boulder, shallow sand rapids, gravel, in

Ill. account of bio-assay of toxin in artificially fertilized eggs.

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Nozawa, Y. & K. Nozawa (1957) 581119 Bull.Jap.Soc.sci.Fish., 23:427-9 (Studies on a disease of Conchocolisphase of Porphyra (Proliminary notes)). Ni En

A rod-bactorium was isolated in the filament of the Conchocelis phase of P. tenera, which may be the cause of a disease causing orange-yellow spots on the oyster shell and may be fatal to the Porphyra.

581119 Ogino, C. (1957)

Bull.Jap.Soc.sci.Fish., 23:447-9

(Amino acid composition of the protein of hatchery diet).

Ni En

Comparison of compositions of dried Mysid, beef liver, silk-worm pupae, blood meal, dried yeast & rice bran, with that of body protein of rainbow trout finger-lings.

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Nakamura, T. (1957) 581126 Kashiwada, K., D. Kakimoto & 581123 (1957)K. Kawagoe Bull.Jap.Soc.sci.Fish., 23:494-6 Bull.Jap.Soc.sci.Fish., 23:450-3 (Paper chromatographic study on sugar (Studios on vitamin B₁₂ in sea water component of rod algae). III. On the diurnal fluctuation of vitamin B12 in the sea and its vortical Chomical composition of 9 spp. of soa distribution in the lake). woods from Aoshima, Miyazaki. Results of analysis by microbiological method of water in Kagoshima Bay & Lake Ikoda; rolation between water temperature & amount of vitamin. SJH: sjh MF SJH:sjh Kikuchi, T., T. Hirano & 581124 Ito, K. (1957) 581127 (1957)I. Okada Bull.Jap.Soc.sci.Fish., 23:497-500 Bull.Jap.Soc.sci.Fish., 23:467-70 (Amino acid composition of the muscle (Polarographic studies of proteins extracts of aquatic animals). contained in fish - Preliminary report). Microbiological analysis of spp. of Ni Scombor, Trachurus, Sepia, Fugu, Octopus, & Mylio. Study of muscles, blood & viscera of Katsuwonus polamis & Meretrix meretrix lusoria. SJHssjh \mathbb{M} M SJH:sjh Baba, H. (1957) 581125 Pannier, F.P. (1958) 581128 Bull.Jap.Soc.sci.Fish., 23:471-5 Acta cient. vonozol., 9(1):2-13 (Studies on the proteins of shell-fish -El consumo de oxigeno de plantas IV. On the non-heat coagulable acuaticas en relacion a distintas fractions). concentraciones de oxigeno (Oxygen Ni consumption of aquatic plants in relation Reports analysis of muscle extracts of to different oxygen concentrations) Moretrix morotrix, Mactra sulcataria & Atrina japonicum. A study of intensity of respiration of marine and freshwater plants. SJH: sjh M FAO: hr MF

Rivière, A. & S. Vernhet (1958) 581129 C.R.Acad.Sci., Paris, 246:2784-7 Contribution à l'étude géochimique des mécanismes de la sédimentation carbonatée en milieu lagunaire (Contribution to the geochemical study of the mechanisms of carbonate sedimentation in a lagoon environment)

Data from various estuaries and brackish water lagoons on salinity, various forms of calcium, and other chemical characteristics of water and mud.

FAO:glk

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Tsujita (1957) 581132

Bull.Soikai reg.Fish.Res.Lab., (13):47 p.

(The fisheries oceanography of the East China Sea and the Tsushima Strait. T.

The oceanographic structure and the ecological character of the fishing grounds). Ni In

Description of the hydrography of the East China sea with emphasis on currents & current divergences. Description of the locations of fishing grounds of mackerol & Japanese sardine, & the seasonal behaviour of sardine as determined by hydrographical conditions.

FAO:tl

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Charniaux-Cotton, H. (1958) 581130 C.R.Acad.Sci., Paris, 246:2814-7 La glande androgène de quelques crustacés décapodes et particulièrement de Lysmata seticaudata, espèce à hormaphrodisme protérandrique fonctionnel (The androgeneus gland of some decaped crustacea and in particular of Lysmata seticaudata, a species with functional protandric hormaphroditism)

Cytological notes on the gland & account of the life-phase conditions under which it is to be observed.

FA0:glk

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Hela, I. & F. Koroloff (1957) 581133 Morentutkimuslait.Julk., (177):36 p. Hydrographical and chemical data collected in 1955 on board the R/V ARANDA in the Baltic Sea

Cruise route, notes on methods and equipment used, and tabulated hydrographic & chemical data.

FAO:tl

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Berthois, L. (1958) 581131 C.R.Acad.Sci., Paris, 246:2920-2 Sédimentation dans l'estuaire de la Loire pendant la crue de mars 1957 (Sedimentation in the Loire estuary during the flood of March 1957)

Discussion of the evidence obtained from the 1957 & the 1955 floods of the role played by floods in the sedimentation processes of this estuary. Palosuo, 1. (1958) 581134 Morentutkimuslait.Julk., (178):24 p. Die Misverhältnisse in den Finnland Umgebenden Meeren im Winter 1956-57 (Ice conditions during the winter 1956-57 in the seas surrounding Finland)

Distribution of different types of ico during various periods in the winter, in the Gulfs of Bothnia and Finland and in Central Baltic. Observations of thickness of ice and its salt content in six localities.

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581138 Masuzawa, J. (1957) 581135 Ichiyo, T. (1957) Roc. ocoanogr. Wks Jap., 3(1).26-35 Rec. oceanogr. Wks Jap., 3(1):1-7 An example of cold oddies south of the On the storm surges caused by the Kuroshio typhoon 5415 'Mario' (I) Description of general features of storm Description, cutting-off, modification & disappearance of cold eddies in the surges, their durability & relations boundary region of Oyashio & Kuroshio. between the wind stress and the storm surges. FAO:tl M M FAO:t1 Yasui, M. (1957) 581139 581136 Ichiyo, T. (1957) Roc. oceanogr. Wks Jap., 3(1):8-15 Roc.occanogr. Wks Jap., 3(1):36-48 On the rapid estimation of the dynamic On the storm surges caused by the topography in the seas adjacent to Japan typhoon 5415 "Maric" (II) Dynamic depth anomalios from 653 Description of storm surges at the observations are plotted against mean stations near the path of the typhoon temperatures of 100 m. layes; 1000 db & along the coast & in the bays. surface is taken as reference level. A D is estimated from those graphs ? a comparison is made between the dynamic topographics of N. Pacific, using present & conventional methods (with T. & S.). FAOstl M M FAO:tl Ichiyo, T. (1957) Hayami, S., Y. Fukuo & 581140 581137 (1957)Rec. occanogr. Wks Jap., 3(1):16-25 D. Yoda Roc.occanogr. Wks Jap., 3(1):49-55 A note on the horizontal oddy viscosity in the Kuroshio On the tidal mixing of sea water through narrow channels Description of the general current pattern near the boundaries of Kuroshio, Description of the mixing by tides in the momentum transport across the respect of temporature & chlorinity in the Naruto & Akashi Straits between Kuroshio, the relation between mean flow Seto Inland Sea & open ocean. & turbulent flow, & application of the rosults in respect of turbulent flow to the distribution of plankton.

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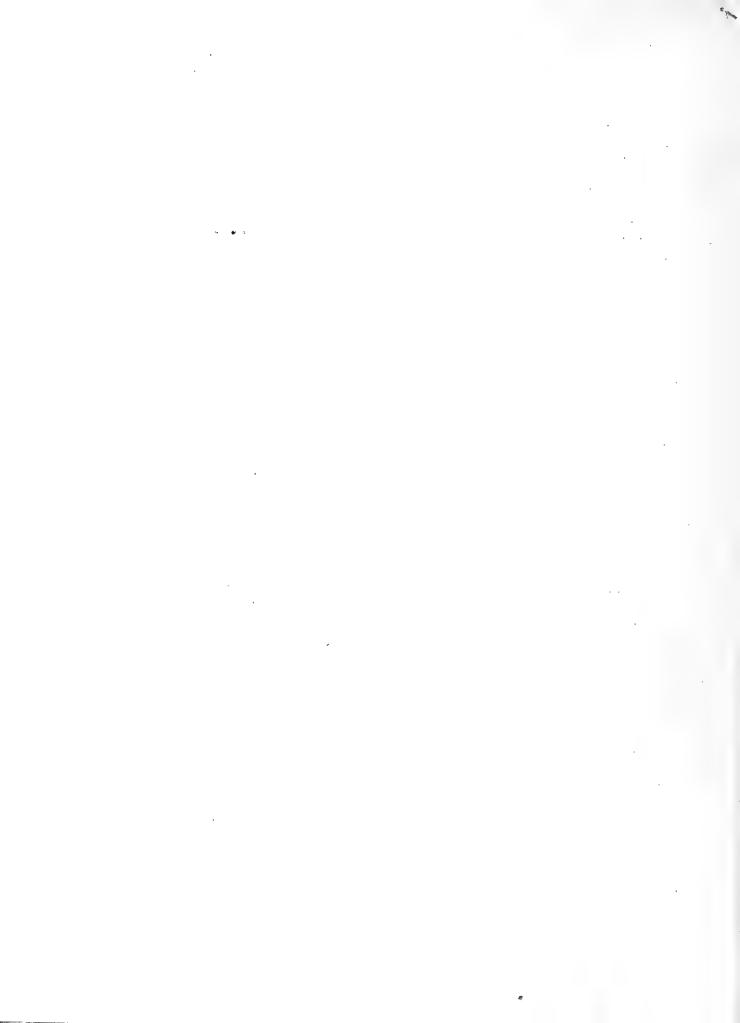
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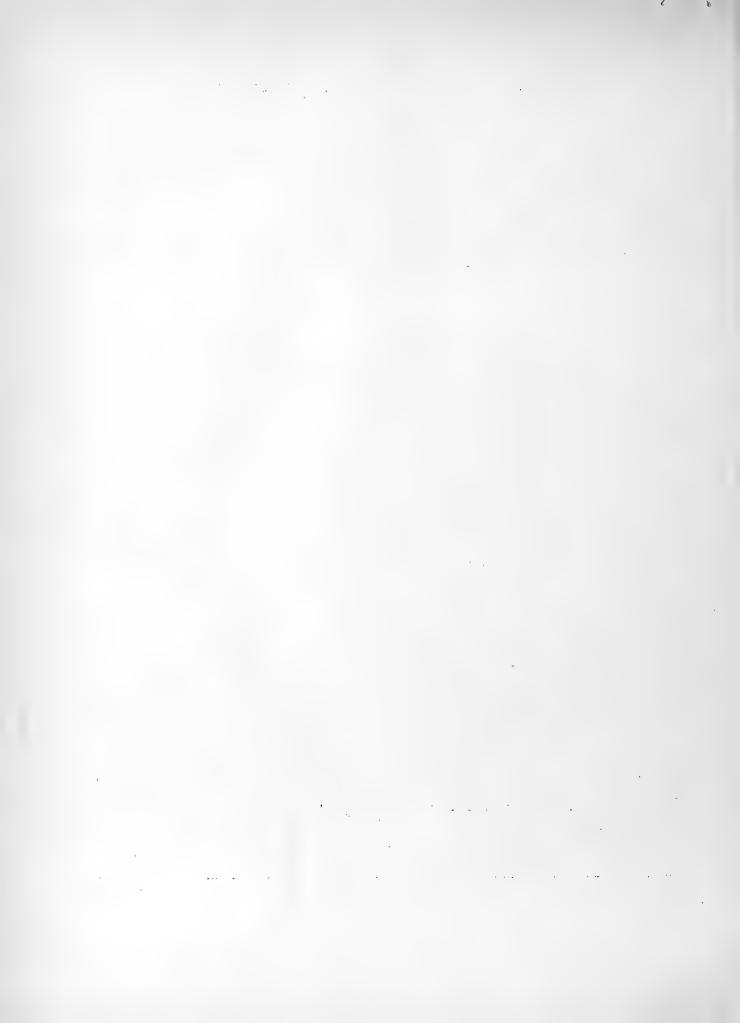
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Curr.Bibliogr.Fish.Sci., 1(5).Suppl.1-5 Rome, July 19
1(5):1-110; A1-7
(containing: references and author index to 581183-581842,
and also geographic index to 580715-581182 /1(4).G1-27 Rome, July 1958



Make appropriate amendment to 580726 & 580725 as follows:

Lo Cron, E.D. (1957) 580726

Proprints of papers to Symposium, on
Oct. 4 & 5, 1957, by Institute of
Biology on the Biological Productivity
of Britain,:23-4

The production of fish in fresh waters

A roview giving comparative figures for production in different areas & of different spp.; relation of production to harvest; general discussion of biological principles involved in improvement of fish culture.

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Lund, J.W.G. (1957) 580725

Paper presented to the Symposium, on
Oct. 4 & 5, 1957, by Institute of
Biology on the Biological Productivity
of Britain, 4 p.

Primary production in inland waters

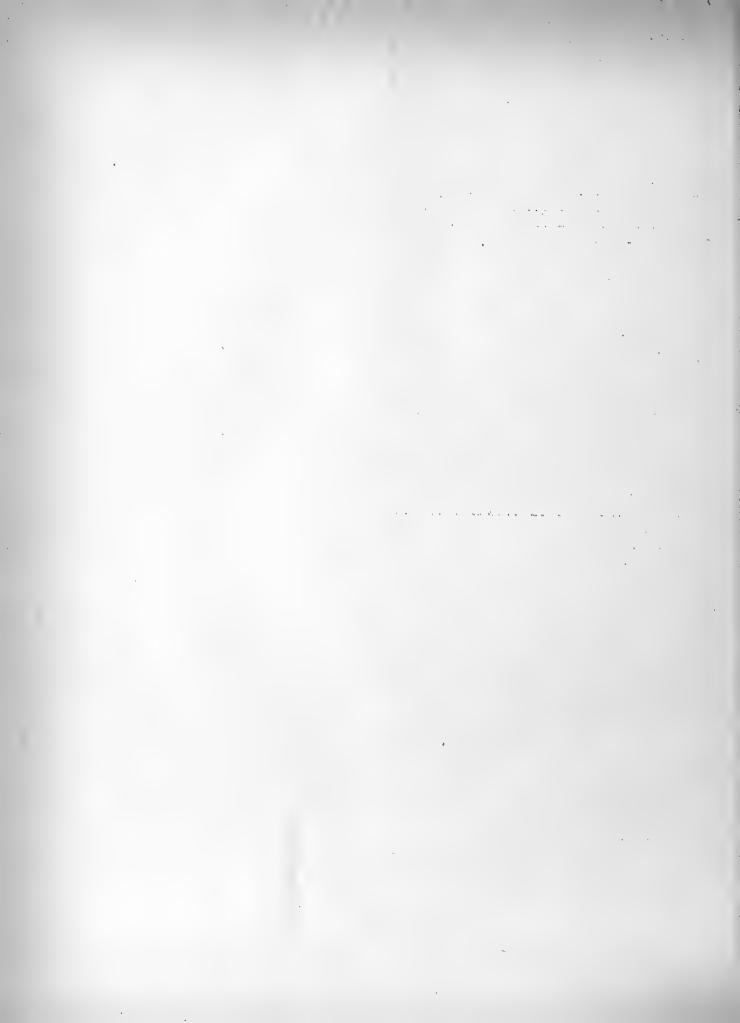
A short general review of present ideas on the measurement of algal production, the factors influencing it, & the possibilities of increasing & directing it for economic gain.

SJH: sjh

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Please note:

Taxonomic Index 1(4) will be published in CDFS 1(6).



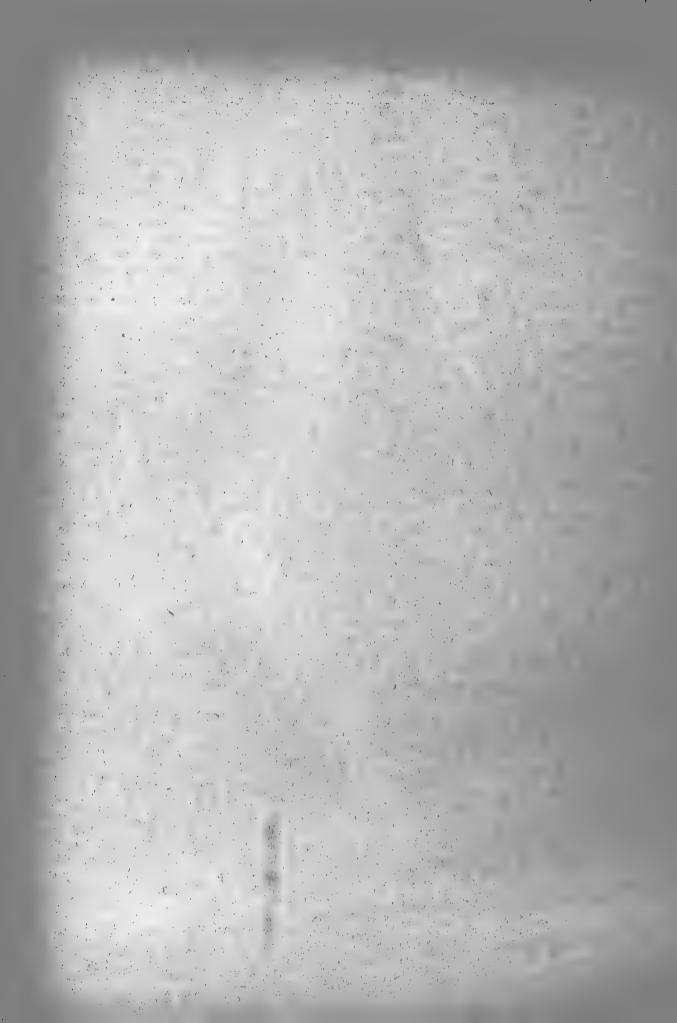
Current Bibliography for Fisheries Science - Supplements

Notes

Previous issues of this bibliography have included supplements giving, for example, codes used in the preparation of the indexes. In this issue we are initiating the practice of distributing supplements giving other kinds of information which we think might be of interest to librarians and to directors of, and participants in, fisheries research programmes. We have in mind especially accounts of meetings the documents of which may not be easily accessible; notices of publication of new journals and other amendments to the "World Periodicals list for Fisheries Science"; guides to, and general reviews of, literature relating to particular aspects of fisheries science, and so on. We shall be most pleased to receive comments and advice on the usefulness of this proposal.

In the following pages is given an account of two meetings which have recently taken place in the Soviet Union, and reports of which, so far as we know, have not yet appeared in English.

SJH



Lange, A.B. (1958)
Zool.Zh., 37(1):151-6
Second Conference of Embryologists of the USSR

Abridged translation by G. Orloff.

The Conference took place from January 28 to February 5, 1957 in the Moscow State University, and was concerned with the problem of the relationship between an organism and its environment at different stages of its development.

In all about 150 lectures were delivered and over 500 people from 50 towns participated.

Apart from the plenary meetings, 4 were dedicated to the development of plants, 15 to development of animals and 2 to man.

- V.V. Popov (Moscow) lectured on the evolution of form-developing relations of animals and their repetition. He concluded that development of protozoa is based mainly on genotypic relations, while in metazoa, gradient relations (polarity) are added; development of vertebrates is characterized moreover by inductive relations. Endocrinic relations are the last to appear in animal evolution.
- B.P. Tokin (Leningrad) discussed briefly the concept of the relations between organisms and their surroundings, as stated in the works of Wolf, Behr, Mechnikov and Kovalevskii; the outlooks on this problem in connection with the mechanism of development (Roux, Speeman, Child etc.); the conception of "surroundings" in the studies of Soviet evolutionary morphologists; the importance, for embryology, of the ideas of Sechenov, Pavlov and Michurin.
- G.A. Schmidt (Moscow) stressed the importance of the ecological method in embryology, especially for analysing internal morphogenetic factors, relations between maternal and filial specimens and stages of development, factors of ontogenesis and evolution, etc.
- S.V. Emelianov (Moscow), in his talk on "A.N. Severtsov and some basic problems of modern embryology", stressed the necessity of directing the development of animals on the basis of studies of individual evolution and of the influence of altered conditions on the formation of species.

Most of the lectures, delivered at specialized meetings on animal embryology, dealt with experimental embryological research on vertebrates. Much of this work is closely connected with animal production, acclimatization and commercial use of natural resources.

Two meetings were devoted to the problem of the influence of external conditions on reproduction, fertilization and sex determination. Many of the papers dealt with the biology of reproduction and fertility of fish. Statements were made on results of experiments with thermal stimulation of the sexual cycle (N.A. Ioff, Moscow), on the connection between the state of genads and the pattern of instinct in male and female fishes (T.I. Faleeva, Leningrad).

- A.V. Zaitscva (Moscow), A.I. Irakhimovich and A.M. Zelekina (Kishinev) supplied data on the histological changes in the hypophysis and gonads in connection with the conditions of reproduction, the rate of growth and sexual maturity of fishes. Accounts were given of peculiar features of fertilization, in relation to polyspermy of Acipenseridae (by A.S. Ginsburg, Moscow) and of certain viviparous fishes (by D.I. Genin, Kiev), and also of the importance of calcium ions in the process of fertilization and activation of Acipenseridae (by T.A. Detlaf, Moscow).
- V.A. Zemskii (Moscow) supplied data on the periodicity of reproduction in Antarctic finback whales, which are of practical use to whalers.
- F.A. Turdakov and B.P. Luzhin (Frunze) discussed the influence which fish eggs exercise on each other, particularly the stimulating effect of dissimilation agents of Diptychus dybowskii roe, when concentrated to a certain degree.

 S.V. Emelianov supplied much information on the successive effect of different factors (degree of spawn ripeness, water current, etc.) on the incubation of sturgeon spawn, and the effect of all such factors on the process of embryogenesis and further development. New data on the relation between the physiological processes of embryogenesis of bony fishes and the oxygen regime were given by G.A. Buznikov.

The structure and function of the oviducal gland of different fishes were dealt with by N.Z. Gerbildkii and G.M. Ignatieva.

The ecologic-embryologic school of ichthyology, typified by S.G. Kryzhanovskii, was represented by S.G. Soin and A.I. Smirnov in their reports on the development of the river Amur and Pacific Salmonidae. They demonstrated the discrepances between the embryogenesis of closely related species (peculiar development of the vascular system, the function of pigmentation, oxygen relations, etc.) in relation to the conditions in which they develop, and refuted the widespread belief in the conservative theory of early stages of evolution.

G.M. Persov lectured on the position of sexual glands and sex determination of Acipenser ruthenus. I.A. Sadov spoke about the formation of the envelope, the micropyle and perivitelline space of sturgeon roe; P.N. Reznichenko about the function of embryonal movements and the development of breathing in bony fishes. T.S. Rass spoke on stadial development of fishes and its ecological aspects.

One of the meetings dealt with alterations of irritability and the so-called critical periods. This shifts the problem of "stadial-development" into the field of physiology. The concept of critical periods, which emerged mainly from studies of fish, acquires an increasing importance. It is proved that reactions to various agents (temperature, chemicals, etc.) in different periods of development, differ both in their immediate result and in form-development. Periods of greatest sensitivity vary also according to species. M.F. Vernidub indicated their connection, in a general way, with the altering character of metabolism. A.N. Trifonova stated that critical periods coincide with the passage from one morphologic stage to another. T.I. Privolnev characterized critical periods by physiological indices and indicated their coincidence with intensive differentiation. Others spoke of peculiarities of phosphorus exchange and of sulphydryl groups. There remains a general impression, that the concept of

critical periods of development is still not in accord with the laws of biological stages. Most workers do not concentrate on disclosing the natural laws of alternating basic conditions of development, but dwell on reactions of the organism to various agents, often chosen at random by the researchers themselves.

Two meetings were devoted to birds: biology of reproduction, development of domesticated species as compared with their wild relatives; effect of external agents during incubation; heredity.

Development of mammals was dealt with at two meetings, one of which was concerned entirely with regeneration and to the problem of "cambiality", conceived by Z.S. Katznelson as a self-restoring capacity of tissues (regeneration), as applied to vertebrate animals.

A few lectures were delivered on the question of comparative embryology of an evolutionary character, and they dealt mainly with invertebrata.

V.A. Sveshnikov dealt with geographic distribution of Polychaets. His studies on the development of, and the influence of seasonal phenomena on White Sea Polychaets, led him to the conclusion that the latter may be divided into four groups - arctic, boreal, south-boreal and cosmopolitan - differing in their thermal reproduction optima, phenology and types of development.

At meetings dedicated to problems of development of the nervous system and sense organs V.V. Popov and Z.A. Sokolova referred to their experimental inversion of the crystalline lens of amphibians' eyes; T.A. Sikharulidze supplied some information on the action of chemicals on the process of regeneration of the lens of mammals; E.A. Baburina reported on peculiarities of the development of eyes and their function, studied in different ecological groups of fishes, at various stages of development. The results of studies carried out by N.P. Lebkova on the lateral eyes of lampreys, confirm the primitive state of development of the eye in Cyclostomata.

Talks on the effect of ionizing radiation on the development of organisms were all delivered at one special meeting. Most of the information supplied concerned problems of embryonic and hereditary anomalies (pathogenesis).

The Conference disclosed the fact that Soviet scientists are working most intensively on problems of experimental embryology, which is no longer contained within the limits of "mechanics of development", and they make an extensive use of ecological, physiological, biochemical and biophysical methods.

The lagging of comparative embryology can be judged by the restricted number of types and groups of animals, being studied. Thus, out of the 15 phyla and over 60 classes of living animals, only 5 phyla and 10 classes were dealt with by the participants in their papers. On the other hand only a few attempts were made at the Conference to treat the problems from the standpoint of evolution. In the light of the basic problem of the Conference, almost nothing was said about such important questions of evolutionary embryology, as the historical outlook on evogenesis, sexual processes, origin of larval forms, types of animal metamorphosis, etc.

The Conference stressed the need for establishing a theoretically sound relation between embryology and practical tasks, by intensifying the study of this branch in the Biological and Soil Science faculties of universities; organizing embryology courses at medical, agricultural and piscicultural colleges; the necessity for publishing, under the aegis of the Ministry of Universities, a a special embryological journal.

It was decided "to call in 1960 a third All-Union Embryological Conference at the Moscow State University" and to dedicate it to problems of comparative embryology in connection with the centennial of the appearance of Ch. Darwin's, "The origin of species" (end of 1859), and of the 150th year of Lamarck's "Philosophie zoologique".

Nikolskii, G.V. (1958)

Zool.Zh., 37(1):158-60

Second meeting of the International

Commission for Fishery Research in the

Western Pacific

Abridged translation by G. Orloff.

This standing Commission was set up as a result of the agreement between the Chinese People's Republic, the Koroan People's Democratic Republic, the Democratic Republic of Vietnam and the Union of Soviet Socialist Republics signed in Peking on the 12th of June 1956. The tasks set before the Commission consist in assisting member nations to carry out research work in pisciculture, oceanology and limnology of the West Pacific Area and to work out measures for intensive breeding of fish and other useful aquatic animals: to promote exchange of information and collections and to assist each other in training specialists. The Minister of Aquatic Products of the Chinese P.R., Siui-De-Khen, was elected Chairman; Prof. P.A. Mciseev (USSR), Kim-Tse-Pir (Deputy Minister of Aquatic Products of the Korean P.D.R.), Le-Zini-Tring (Deputy Minister of Agriculture and Forestry of the D.R. of Vietnam) were elected Deputy-Chairmen. Prof. Tun-Di-Chow (Chinese P.R.) was elected Scientific Secretary. Four Sections were constituted within the Commission: Sea Fisheries Section (Chief, Prof. V.G. Bogorov, USSR), Inland Fisheries and Limnology Section (Chief, Prof. U-Sen-Ven, Chinese P.R.), Fishery Resources Conservation Section (Chief, Prof. G.V. Nikoloskii, USSR).

The second plenary meeting of the Commission started in the premises of the Biology - Soil Science Faculty of the Moscow State University on the 15th of August 1957. Besides the delegates of the four signatory countries, an observer representing the Mongolian People's Republic and many visitors were present at this session. In his opening speech, the Chairman stated that, thanks to the efforts of its members and experts, the targets set for the Commission were, on the whole, attained. Siui-De-Khen described the problems that have yet to be solved and should be discussed during the meeting. Prof. Tun-Di-Chow reported on the Commission's past activity and working groups were formed for the preparation of decisions to be taken by the Commission. Prof. P.A. Moiseev delivered a lecture on "The biological basis of fisheries' economy in the West Pacific".

The following lectures were delivered during Section meetings on August 16, 17 and 19: "Study of the interdependence of winds and surface sea-currents, within the coastal belt of China" by Guan-Bin-Siang; "Some basic problems of precipitation in the N.W. part of the Pacific Ocean" by A.D. Dobrovolskii; "Geomorphology and tectonics of the N.W. Pacific" by G.B. Udintsev; "Far-East benthos and the laws of its composition and distribution" by P.V. Ushakov: "Biogeographic areas in the N.W. Pacific" by V.G. Bogorov; "Poculiar composition and laws of distribution of zooplankton in the N.W. Pacific" by K.A. Brodskii; "Biogeographic basis of the fish-searching map" by G.U. Lindberg; "Study and culture of sea-kale" by Tsen-Chen-Kui; "Theoretical basis for drawing topographic charts of the sea-bed" by E.F. Gurianova; "Trade and biology of mackerel in the Chefu Weihawei region" by Chow-Shu-Pin; "Korean Gulf mackerel" by Tian-Ir-Khan; "Biology of the mackerel of the Sea of Japan" by A.P. Vvedenskii; "Korean Gulf pollack" by S.M. Kaganovskaia and Tian-ir-Khan; "Yellow perch in the coastal waters of the Yellow Sea" by Kim-Dok-Gien; "Experimental and commercial fishing by use of electric light in the West Pacific" by P.G. Borisov; "Soa fishing in Vietnam" by Huan-Shuen-Hai: "Outline of Chinese fisheries in the Gulf of Tonkin" by Chen-En-Shu. The information, supplied on the behaviour of mackerel and yellow fish, on sea-kale culture and on fishing in the Gulf of Tonkin, greatly interested Soviet scientists.

During meetings held by the Section of Inland Fisheries and Limnology and of Fish Resources Conservation the following papers were presented: "The position of Mongolian bodies of water within the zoogeographic pattern of the Pacific Ocean system" by A. Dashidorji; "Building up of fish resources in water reservoirs of USSR" by P.A. Driagin; "Scientific basis for control over the number of Acipenseridae and the extension of the area they inhabit" by N.L. Gerbilskii; "Artificial breeding of Acipenseridae" by N.I. Kozhin and O.L. Gordienko; "Characteristics of the environment and fishery resources of the Lake Len-Tzy-Hu" by Lin-Dzin-Kan; "Preliminary report on the type of evolution and biological productivity of Lake Tsinhai" by Li-Shan-Hao; "Methods of Tilapia mosambica breeding" by Tran-Kong-Tam; "Experience and possibilities of breeding rainbow trout in the Korean P.D.R." by Bek-Sen-Hen; "Methods of breeding Ctenopharyngodon idella, Mylopharingodon piccus and Hypophtalmichtys molitrix" by Ni-Da-Shu; "Data on the production of a winter-resisting breed of carp" by V.S. Kirnichnikov.

G.V. Nikolskii delivered a lecture on "The biological bases for control over fishing" and A.I. Isaev on "The state of fish conservation in USSR".

Among the problems which are on the 1958 program are mentioned the standardization and coordination of methods for carrying out oceanographic, limnclogical and piscicultural research, as well as the encouragement of scientists to write articles for publication by other countries.

Joint research projects will be conducted in the Yellow Sea, in the Amur river system, in the Gulf of Tonkin, the isle of Haikan area, the Yalu river water reservoir, etc.

The Limnology and Inland Fisheries Section will make a point of working on the problem of forecasting the piscicultural regime of water reservoirs in conditions of the monsoon climate of Eastern Asia.

The third session of the Committee will take place at Pyongyong, in 1958.

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Russian F.S.S.R.	580898 580901	580899 580902	580900 580903
Latvian S.S.R.		580771	580950
ATLANTIC OCEAN			
Atlantic, North	580778 580824	580782 580825	580823
Atlantic, N.W.	580840 581076	580870	580905
Chesapeake Bay	580820 581170	581014	581150
North Sea Mediterranean Sea Tyrrhenian Sea		580728	581093 580980 580286
Black Sea Gulf of Guinea	580890	580925 581094	580937 581095
INDOPACIFIC OCEAN	580742 580832	580779 580986	580831 580989
	581005	581148	581151
Pacific, North	580778 580829	5808 1 7 580952	580826 580958
Japan Sea Tropical Indopaci Indian Ocean	580960	580731	580929 580807 581067
Indopacific, Central East China Sea Pacific, S.E.	580921	580954	581015 581132 580830
POLAR SEAS			
Arctic Ocean			580809
INLAND SEAS AND I	INTERTER:	RITORIAL	
East African Lake	es		581061
Lakes Aral Sea		580870 580893	

1% 581186 581183 ; Baird, R.H. (1958) Wilimovsky, N.J. & W.O. World Fish., 7(6):43-9 (1957)Freihofor Aqualung diving - Threat to fishermen? Spoc.sci.Rop.U.S.Fish Wildl.Sorv., (209) 266 p. Popularity of self-containing underwater Guide to literature on systematic breathing apparatus has led to complaints biology of pacific salmon from fishermen that divers may interfere scriously with fish stocks, that their . General subject index, index of topics nets and lobster pots are likely to be by spp. & annotated bibliography. robbed and that the new sport could load to diminished catches. Article gives facts, and proves that fishermen may gain more from activities of divers than they are likely to lose. M GLK:glk MIT SJHasjh 581187 Anonymous (1958) Stuart, T.A. (1957) 581184 World Fish., 7(6):68 Froshw. Salm. Fish. Res., (18):27 p. Some facts about turbot in Scottish The migrations and homing behaviour of water brown trout (Salmo trutta L.) A summary of an articlo in Docember Describes investigations in Scottish 1957 issue of "Scottish Fisheries lochs on young and mature fish. Bulletin" (Scottish Home Dept). SJH.sjh M \mathbf{F} FAO: wad 581188 Anonymous (1958) Buchanan, J.B. (1958) 581185 World Fish., 7(6):71 Proc. zool. Soc. Lond., 130(1):1-56 Moderate fishing only forecast for The bottom fauna communities across the Bear Island continental shelf off Accra, Ghana (Gold Coast) Prodictions for Cod Fishery in 1958, based on "Fish Stock Record" (2). Describes area covered to depth of 5 fms; physical environment (wave action, currents, particle size of deposits & organic matter, temperature, salinity, nutrients, plankton); the fauna (collecting mothods & gear, the animal communities, quantitative analysis. Full bibliography & tablos of data. M SJH:sjh L FAO:sjh

Fisher, R.L., A.J. Carsola & 581189 Richards, A.F. (1958) 581192 (1958)Doop-Soa Ros., 5(1):29-35 G. Shumway Deep-Sea Res., 5(1):1-6 Transpacific distribution of floating pumice from Isla San Benedicto, Mexico. Deep-sea bathymetry north of Point Barrow A probable transpacific drift of floating Description of the bathymetric features trachytic pumice originating from the 1952 erruption of Volcán Bárcena on Isla of the area. San Bonedicto off the west coast of Mexico is reported. Pumice from San Benedicto was collected in the Islas Revillagigodo and on Hawaii, Johnston, Wake & the Marshall Islands. GLK:tl $\mathbb{L}^{\mathcal{I}}$ GLK:tl M Koczy, F.F. & M. Burri (1958) 581190 Hassan, J.M. (1958) 581193 Deep-Sea Res., 5(1):7-17 Deep-Sea Res., 5(1):36-43 Essai d'interpretation de quelques On the wind driven ocean circulation formes du terrain sous-marin (Essay on the interpretation of some features Consideration of a theoretical model of the sub-marine bottom). assuming the absence of vertical motion & constancy of the coofficient of Description of some bathymetric exchange of mondartum. features of the ocean floor, with omphasis on tectonics. The advantage & disadvantages of 2 different nomenclatures are briefly discussed: the descriptive & the genetic approach. M GLKatl M GLK:tl Brodie, J.W. & T. Hatherton (1958) 581191 581194 Weston, D.H. (1958) Doop-Sea Ros., 5(1):18-28 Doc-Sca Ros., 5(1):44-50 Observations on a scattering layer at The morphology of Kermadoc and the thermocline Hikurangi trenches Bathymotric description of the trench Doscription of the observations of the which extends 700 miles from 26°S thermocline & scattering layer in the toward New Zoaland. New names, Hikurangi North Sca, dotormination of ccho reflection coefficient & the variation Tronch, Colvillo Ridge, & Havro Trough of the depth of thermocline. are proposed for bathymetric features not previously clearly defined. GLK: tl GLK:tl M M FAO/58/7/5823

ν,			
Burt, W.V. (1958) Deep-Sea Res., 5(1):51-61 Selective transmission of light tropical Pacific waters	581195 i	Ladd, H.S. & J.I. Tracy Jr. (1957) Doop-Soa Ros., 4:218-9 Fossil land shells from doop dril of the Pacific atolls	-
Transmission of light was measu thirteen wave lengths on 46 wat samples drawn from the ocean in eastern tropical part of the PaOcean. A comparison with other oceanographic light-transmissio made.	cr tho cific	Contents as per title.	
GLK:tl	M	: tl	M
Richardson, W.S. & C.H. Wilkins (1958) Doop-Soa Ros., 5(1):62-71 An airborne radiation thermome An instrument for measuring soa surface temperatures from aircraft is described. Infra-red radiation from the wa surface is compared with the rad from a black body at known temp within the instrument.	tor diation	Stommel, H. (1958) Deep-Sea Ros., 5(1):80-2 The abyssal circulation An outline of the flow pattern for abyssal circulation of the world	
GLK: tl	M	GLK:tl	M
Kuonon, Ph.H. (1958) <u>Doop-Soa Ros.</u> , 5(1):79 Fossil land sholls from doop dr holos of the Pacific atolls Review of 581198.	581197 ill	Marshall, A.R. (1958) Tech.Ser.Fla Bd Conserv., (22):39 A survey of the snook fishery of with studies of the biology of the principal species, Centropomus undecimalis (Bloch) Spp. composition of catch; histomethods of capture, gear selective places & seasons of fishing, prosestatistics; condition of fishery bionomics & ecology of the spp.	Florida, no ry, vity, duction
GLK:	IA	FAO:sjh	M
_FAO/58/7/5323			

Cordone, A.J. (1958) 581201 Calif.Fish Game, 44:205

The physiology of fishes. II. Behaviour

Review of 570208.

Mosstorff, J. & R. Steinberg(1958)581204 Fischwirt, 8:47-56 Uber die Verwendungsmöglichkeiten von

Uber die Verwendungsmöglichkeiten von Heholoten in der Binnenfischerei (On the possibilities of using echosounders in inland fisheries)

Description of small echosounders from different manufactures and their possible use in inland fisheries and limnology.

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Scattergood, L.W. (1957) 581202
Res.Bull., Maine, (26)
A bibliography of the herring (Cluped harengus & C. pallasii)

108 pages of titles & references listed in alphabetical order of authors' names; special attempt was made to make this complete for C. harengus stock of N.W. Atlantic.Reports on catching, processing & marketing not indicated unless they contain also information on biology.

FAO:sjh

II

Cagle, F.R. (1957) 581205 Louisiana Conserv., 9(7):2-3 Is turtle destroyer of fish and game?

Popular description of feeding habits & biotic relations.

FAO:glk

Bahr, K. (1958) 581203
Fischwirt, 8:29-42
Gemeinsame Bewirtschaftung des Rheinstromes durch Berufs- und Sportfischer Erfahrungen aus der hessichen Rheinfischerei (Joint management of the Rhine by professional and sports fishermen. Experiences from the Rhine fishery in Hessen)

Morphological description of Rhine in Hessen; distribution of the fishery between professional & sports fishermen; improvement of fishery, & description & amounts of gear. General evaluation of the fishery in Hessen is also given. FAO:tl

Viosca, P., Jr. (1957) 581206 <u>Louisiana Conserv.</u>, 9(7):10-3, 20-1 Shrimp potpourri

Popular account of the industry with description of some spp.: Penacus setiferus, P. aztecus, P. duorarum, Xiphopenacus kroyeri, Macrobrachium ohione & M. acanthurus.

FA0:glk

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International Commission for the 581207 Northwest Atlantic Fisheries (1958) Halifax, 58 p.

Statistical Bulletin vol. 6 for the year

In 2 parts: summary of fishory in Convention area 1952-56, no. of vessels fishing in 1956, list of common & scientific names of spp.; lists of abbreviations, symbols & conversion factors, tables for landings of each sp. by area, gear, menth & country, & for fishing effort expended. Appendix gives corrections to Vol. 5.

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(Card 2)

Teiling, I. (1957)
Bot.Notiser, 110(1):49-82
Morphological investigations of asymmetry in desmids

Discusses terminology & different types of asymmetry, & their morphological & taxonomic significance.

581208

Berthois, L. (1957) 581211
Rev.Trav.Off.Pôche marit., 21:485-554
Recherches sur les sediments de la mer du nord et de la mer d'Irlando (Research on the sediments of the North and Irish Seas)

operations carried out in the bank of

Avino on the coast of Norway.

Studies of the granulometry of the sediments, total nitrogen content, morphometry & lithology of gravel, etc.

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Ancellin, J. (1957) 581209
Rov.Trav.Off.Pôches marit., 21:449-84
Observations sur la faunc et les fonds
de pêche de quelques secteurs de la
Manche et des mers nordiques) (Observations on the fauna and fishing banks
ef some areas of the English Channel & the Northern Sees)

Gives a list of invertebrates dredged at several stations in the North Sea & English Channel, & information on the topography, hydrography, (salinity, temporature & currents), nature of bottom, & fauna (benthic invertebrates & fishes) collected during dragging & trawling

Balloy, M. (1957) 581212

Rov.Trav.Off.Pôcho marit., 21:555-60

Résultats de quelques experiences sur l'élévage d'animaux et d'algues en aquarium d'eau de mer fonctionnant en circuit fermé (Results of some experiments to raise animals & algae in a salt water aquarium operating on a closed circuit)

Experiments & observations on the role of different organic & inorganic chemical agents.

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de La Tourrasse, G. (1957) 581213

Rev. Trav. Off. Pêche marit., 21:561-92

La pêche au thon sur la côte basque poursuit sa modernisation (The tuna fishery on the Basque coast continues its modernization)

Reviews the improvements which have been made since 1952 to bait tanks, fishing operations, and fishing craft.

Klopov, S.V. (1957) 581216
Priroda, Mcskva, 46(9):13-22
Problema Amura (River Amur problems)

Deals mainly with industrial & agricultural problems, hydro-electric power plants & flood control. Attention is called to the necessity of providing hydraulic structures with fish-ways, in order not to impede the spawning run of salmonidae, & of stocking artificial water reservoirs with fish.

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Mordukhai-Boltovskoi, F.D. (1957) 581214 <u>Priroda, Moskva</u>, 46(7):99-100 <u>Kaspiiskio nizidy v roke Sheksme</u> (Caspian mysidae in the river Shexna)

Capacity of upstream migration of mysidac. Description of specimens found in the river Shexna (left-bank tributary of the Volga), over 3000 km from the Caspian Sea.

Balabanova, Z.M. (1957) 581217

Priroda, Moskva, 46(9):55-60

Za chistotu vodocmov Urala (In dofense of the purity of Ural water courses & reservoirs)

Doscribos the disastrous offect of water pollution by industrial concerns, which are mostly deprived of adequate purifying contrivances. Points out a few cases, which prove that it is possible not only to avoid pollution, but even to improve the quality of water & silt by proper treatment of industrial waste.

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Kleinenberg, S.H. (1957)
Priroda, Moskva, 46(7):101-3
Ob okhrano morzha (Walrus conservation)

Description of the animal, its habits & abodes. Commorcial use, degree of extermination & conservation measures.

Richtor, G.D. (1957) 581218

Priroda, Moskva, 46(9):95-8

Ozora Zapadno- Sibirskoi nizmonnosti
(Lakos of the West Siberian low lands)

Description of the numerous lakes & a tentative classification, according to their size, shape, surroundings & supposed origin. In only one instance the author refers to living organisms, when he states that small lakes with peaky banks "are almost devoid of plant or animal life."

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Dolgopolov, K.V. & H.F. 581219
Fodorova (1957)
Priroda, Moskva, 46(10):63-72
Na borogakh volikoi Russkoi roki
(On the sheres of the great Russian river)

Description of the Volga regions. Attention is paid mainly to the industrial development. The author states that when the riverflow will be entirely under control, the Volga discharge into the Caspian shall be reduced by 60% & fish production will drop by 130,000 tons.

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valley)

Postnov, V.A. (1957)

ship MIKHAIL LOMONOSOV)

zoo- & phytoplankton, etc.

Kuznetzov, N.T. (1957)

V Turgaiskoi lozhbino

Priroda, Moskva, 46(12):38-9

The main aim of the article is to

are threatened by the creation of

artificial water reservoirs on

promote wildlife conservation measures.

The fish resources of the valley's lakes

agricultural concorns, which draw on tho

main water resources of the lakes - snow.

Organized maintenance of these lakes

LOMONOSOV

Priroda, Moskva, 46(10):108-9

Novoc ekspoditsionnoc sudno MIKHAIL

Description of the newly built ship,

equipped for scientific research. The

Data will be collected on atmospheric

processes, origin of cyclones & anti-

the ocean bottom, currents, magnetic

fiolds, salinity & light distribution,

ship is assigned to the North Atlantic.

cyclones, relief & geologic structure of

(Now scientific-expedition

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Vinogradov, M.H. (1957) 581220 Priroda, Moskva, 46(10):89-92 Ozora Antarktichoskogo "Oazisa" (Lakos of the Antarctic "Oazi".)

Description of unfrozon lakes & fjords, explored by Soviet scientists in January 1956. The phytoplankton consists of several genera of algae. As regards zeeplankton, a species of Acanthocyclops was discovered in a freshwater lake, & Nematod's were found in saltwater lakes.

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Movchan, V.A. (1957) 581221

Priroda, Moskva, 46(10):107-8

Rybovodstvo v kolahozakh i sovrkhozakh
(Fish breeding on collective & state farms)

Notes on the conference held in March 1957 by the All-Union Acadeny & Ministry of Agriculture of USSR. Statements on areas under pisciculture, yields & returns of fish farming. Necessity stressed for improved qualification of specialists & for organizing selected fish nurseries.

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Kozlov, V.V. (1957) 581224

Priroda, Moskva, 46(12):40

O zagriaznonii roki Enisei (Pollution of the river Yonisei)

The author states that practically nothing is done to prevent industrial concerns from discharging noxious waste into rivers. Long sections of the Yemisei around cities are poisoned. 200 km of the R. Kan, 100 km of the R. Abakan, and lake Piasine have lost most of their fish resources.

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Kurchkov, I.I. (1957) 581225 Prircda, Moskva, 46(12):49-54 Vozdeistvio vulkaniz ma na rochnnin faunu (Influence of volcanism on the river fauna in Kamchatka)

Ash, deposited by volcano oruption on river beds, smothered the benthes. Acidity increased. Benthos feeders suffered more than Salmonidae. Spawning ground was buried. Spawn suffers, even when no cruptions occur, from infiltration of noxious substances, carried by springs at the foot of volcanos, & from ropoated carthquakes.

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Ermolonko, V.M. (1957) 581228 Priroda, Moskva, 46(12):115-6 Krab - plavunots (Portunus holsatus Fabr.)

Description of this small Black Sea crab & of its habits, particularly of the use it makes of jelly-fish & floating algae as a means of transportation.

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Shkola, V.I. (1957) . 581226 Priroda, Moskva, 46(12):60-5 Antibiotiki v zhivotnovodstvo of antibiotics in zooculture)

The author states that experiments have been carried out with feeding antibiotics to carp: 25-50 mg por 1 kg of food, produced a 10-15% increase in weight.

Klinglor, K. (1957) 581229 Schweiz.Z. Hydrol., 19:565-78 Natriumnitrit, ein langsamwirkendes (Sodium nitrite, a slowly Fischgift offecting fish poison)

Investigations on the influence of various doses of the chemical on fish and description of the symptons of the poisoning.

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Tarasov, N.I. (1957) 581227 Priroda, Moskva, 46(12):101-2 Eshche raz o svechenii moria (Moro about luminiscence of the sea)

The author complains of the difficulties mot with in attempting a thorough study of this phonomonon & of the living organisms which are responsible for it. Descriptions are drawn mainly from the English periodicals "Marine Observer" & Naturo".

Hamman, A. (1957) Schweiz.Z.Hydrol., 19:579-612 Assimilationszahlen submerser Phanerogamen und ihre Beziehung zur Kohlensäureversorgung (Assimilation numbers of submerged Phanerogams and their relations

to the supply of carbon dioxide)

Invostigations of the influence of various environmental factors & the relation between surface area of the plant & chlorophyll content on the assimilation number.

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Fjeldstad, J.L. (1958) J.Cons.int.Explor.Mer, 23:147-50 Harald Ulrik Sverdrup, 1888 - 19 An obituary and short biography oceanographer.	957	Lee, A.J. & G.C. Baxter (1958) J.Cons.int.Explor.Ner, 23:157-60 A note on the use of the Nansen- Pettersson water-bottle Report on tests of insulating pre Comparison with theoretical predictions	
GLK:sjh	M	GLK:sjh	M
Tait, J.B. (1958) J.Cons.int.Explor.Mer, 23:151-4 Harold Thompson, 1890 - 1957 An obituary and short biography fisheries biologist.	581232	Buchanan-Wollaston, H.J. (1958) J.Cons, int. Explor. Mer, 23:161-72 Statistical tests for significant applicable to distributions in spanning applications of non-integral mulnomial distributions, and normal square approximation, to angular measurement of currents by Carru Drift Indicator, residual currentish-marking experiments.	ce pace ti- chi- thers
GLK:sjh	M	GLK:sjh	MF
Boury, M. (1958) J.Cons.int.Explor.Mer, 23:155-6 Louis Lambert, 1886 - 1957 An obituary & short biography, waccount of his contributions to fish culture.		Marshall, P.T. (1958) J.Cons.int.Explor.Mer, 23:173-7 Primary production in the Arctic An attempt to account for facts the Arctic water over Bear I. bank, production starts in April, but runtil June in deeper Atlantic water western Barents Sea, & that a phy plankton outburst takes place in north-east wardly receding ice, the Sverdrup's (1953) theory of interest of critical depth with that of homogeneous layer.	not ter of yto- wake of
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Nielsen, L. Steemann (1958) Birkett, L. (1958) 581237 J. Cons. int. Explor. Mer, 23:178-88 J. Cons. int. Explor. Mer, 23:202-7 The balance between phytoplankton and A basis for comparing grabs zooplankton in the sea Comparative tests, on the Dogger Bank, A review of the relations between of Petersen & van Veon benthos grabs. standing crops, turnover & distributions Sampling efficiency & its relation to of zoo- & phyto-plankton, with comment on bias in net-samplos, & the effect of depth of penetration of sea-bed by grab jaws; implications of this bias. grazing undor stable hydrographic conditions. GLK:sjh M GLK:sjh Nicholson, H.F. (1958) 581238 J. Cons. int. Explor. Mer, 23:189-91 Mechanical pipette for picking out The world's southernmost indigenous cod diatoms An electrically controlled apparatus is described & ill. which picks up tho U.S.A. larger diatoms mechanically. It requires no special parts and is made from easily available components.

581241 Wise, J.P. (1958) J. Cons.int.Explor.Mer, 23:208-12

Report on results of Gadus callarias L. tagging off the coast of New Jersey,

GLK:sjh

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Saville, A. (1958) 581239 J. Cons. int. Explor. Mer, 23:192-201 Mesh selection in plankton nets

Comparative exporiments with ocvered nots, and paired hauls of various moshsizes; selection curves for copepods, molluscan & annolid larvae, & fish eggs.

Dragesund, 0. (1958) J. Cons.int. Explor. Mer, 23:213-27 Reactions of fish to artificial light, with special reference to large herring and spring herring in Norway

Experiments on behaviour of Clupea harengus using lights & echo-sounder; relation to hydrographic & plankton conditions.

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Bolster, G.C. (1958)

J.Cons.int.Explor.Mer, 23:228-34

On the shape of herring schools

Echo-survey using Decca navigator in English Channel to plot shoals of Clupea harongus & relate their alignment to tidal streams & topographic features of sea-bed. Relation of results to conduct of drift-net fishing.

Baird, R.H. (1958) 581246

J.Cons.int.Explor.Mer, 23:249-57

Measurement of condition in mussels and oysters

Comparisons of various methods for Mytilus & Ostraca loads author to conclusion that volume measurements of whole organism, shell, & meat are satisfactory & convenient. Criteria for solection of samples; relation of condition to size & spawning period.

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J.Cons.int.Explor.Mer, 23:235-44
Diet-induced variation in the free amino acid complex of Sardinops caerulca

Paper partition chromatographic analysis of amino-acid content of pectoral muscle; relation of concentration of various acids to diet & condition; significance of results for use of this method for study of systematics of populations of sub-specific rank.

Jordan, H.D. (1958) World Crops, 10:83-6 581247

Damago causod by Sarmatium curvatum, Sesarma alborti, S. angolonse & S. huzardi feeding on rice seedlings cultivated on tidal mangrove swamps of Sierra Leone.

Rice destruction by crabs

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Mauchline, J. (1958) 581245

J. Cons.int.Explor.Mor, 23:245-8.

An improved instrument for measuring small crustacea

Ill. description of instrument for measuring prawns Screw micrometer modified so that measurements could be made between two jaws, one fixed & one floating. The fixed jaw is independent of the fixed micrometer anvil, & its position relative to the floating jaw can be altered.

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Rounsefell, G.A. (1957) 581248 Fish.Bull., U.S., (122):451-68 Fecundity of north American Salmonidae

Review & analysis of published data for Salvelinus, Oncorhynchus & Salmo.
Variability between stocks, & differences in average size of fish & age at maturity.

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Moreier, P. (1957) Schweiz.Z.Hydrol., 19:613-23 L'afration naturelle et artificielle des lacs (Natural and artificial aeration of lakes) Study of the effect of aeration on the purification & quality of the natural		Tucker, M.J. (1958)	
water used for domestic purposes			
FAO:tl	F	GLK:	M
O.H.S. (1958) J.Cons.int.Explor.Mcr, 23:258-9 The flow of water through the St. Dover related to wind and differ in sea level Review of original article with same title by Bowden, K.F., 1956 Phil.Trans., 248A(953):517-51.	the	Kalle, K. (1957) Ber.dtsch.Komm.Meeresforsch., 14 Chemische Untersuchungen in der Irminger See im Juni 1955 (Chemische Untersuchungen in the Irminger Sections for phosphate, dissolved oxygen, intensity of fluorescence degree of turbidity are discussed reference to water movements & in processes.	anomical in the second
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O.H.S. (1958) J.Cons.int.Explor.Mer, 23:259 Curronts in Sea Straits Review of original article in Go by Defant, A., (1955), Dtsch.hyd 8(1):1-15.	581251 erman drogr.Z.,	U.S. (1958) J.Cons.int.Explor.Mer, 23:261-2 Chemical investigations in the Irminger sea in June 1955 Review of 581253.	581254

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Wüst, G. (1958) 581255 Jensen, Aa.J.C. (1958) 581258 J. Cons. int. Explor. Mcr, 23:267-8 J. Cons. int. Explor. Mer, 23:263-4 The bottom water. II Temperature. The Biological and hydrological factors controlling the migration of mackerel SNELLIUS expedition in the eastern part from the Black Soa to the Soa of Marmara of the east Indian Archipolago 1929-1930 Review of original articlo with the same Review of original article with the same title by van Riel, P.M., (1956), 3.J. title by Demir, M. & A. Acara, (1955), Brill, Leiden, Vol. II, 5(2). Proc.gon. Fish. Coun. Modit. 3:365-76. GLK: M GLK: M Woenink, M.P.H. (1958) 581256 Stott, B. (1958) 581259 J. Cons.int. Explor. Mer, 23:264-6 J. Cons. int. Explor. Mer, 23:268 The computation of occanic and Artificial hybridization between moteorological fields of motion with different species of the salmon family friction proportional to the velocity Review of original article with the same title by Alm, G., (1955), Rep. Inst. Review of original article with the Freshw. Res. Drottning., (36):13-56. same title by Wyrtki, (1956), J.mar.Ros. Indonesia, 2:1-26. GLK: MF GLK: M Groen, P. (1958) 581257 S.S. (1958) 581260 J. Cons. int. Explor. Mer, 23:266-7 J. Cons.int. Explor. Mcr, 23:269-70 Partition of energy between geostrophic Investigations on age and growth-rate of and non-geostrophic oceanic motions cel population in the Sakrower Sca Review of the original article in German Review of original article with the by Rahn, J., (1955), Z.Fisch., 4(3-4): same title by Veronis, G., (1956), Doop-Sea Res., 3:157-77. 235-56.

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Arakawa, H. (1957) 581261 Geofis.pur.appl., 38:231-49 On typhoon storm tides	Curl, H., Jr. (1957) 581264 Q.J.Fla Acad.Sci., 20:205-8 Changes in bottom topography off Alligator Harbor since 1889
	Contents as per title.
M	GLK:tl M
Boneo, E. & R. Cassinis (1957) 581262 Geophys.Prospectg., 5:82 The bottom of the Strait of Messina: geological and geophysical studies	Darbyshire, J. (1957) Dock Harb.Author., 38:277-8 Sea conditions at Tema Harbour: Analysis of wave recorder observations
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(Statistical data observed on board the Japanese whaling ships for 10 years commencing at 1946). Ni

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Meteorologische Beobachtungen von
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(Meteorological observations on Gorman
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Belt-sea)

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in the light of Polish research)

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<u>Recent underwater surveys using low-frequency sound to locate shallow bedrock</u>

Kotthaus, A. (1958) 581289

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Untersuchungen über den Schollenbestand der südöstlichen Nordsee im Jahre 1957

(Investigations on the plaice stock in the south-eastern North Sea in the year 1957)

Age composition, growth, relative population densities of different year classes, length composition of catches and comparison between investigations at sea and on fish market.

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Forschungsfahrt dos FFS ANTON DOHRN in das Gobiet Island - Grönland
(Expedition of FRV ANTON DOHRN in the Icoland - Greenland area)

Short account of the work done on the expedition for polar front survey (27.II - 22.IV 1958).

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Bal, D.V. & K.H. Mohmed (1957) J.Bombay nat.Hist.Soc., 54:732 A systomatic account of the ed Bombay	2-40	Gokhalo, S.V. (1957) J.Bombay nat.Hist.Soc., 54:714-25 Operation of the Dol not off the Saurashtra coast	581294
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Waldron, K.D. (1958) Contr.Fish Comm.Oro., (24):43 The fishery and biology of th Dungeness crab (Cancor magist in Oregon waters	p. c	Ibrahim, K.H. (1957) J.Bombay nat.Hist.Soc., 54:826-34 Bionomics of forago fishes: observations on the fecundity of common spp. of minor barbols	
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Sufi, S.M.K. (1957) 581303 Pakist.J.Sci., 9(4):170-2 Occurrence of fishes of the genus Clyptothorax in Poshawar and Hyderabad divisions of West Pakistan	A. & M. Colloge of Texas, Dept. 581306 of Oceanography & Meteorology (1958) College Station, Texas, 14 p. Catalogue of IGY oceanographic data in IGY World Data Center A
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Die Möglichkeiten der Bewirtschaftung von stehenden Gewässern und Flussläufen Mit Hilfe der Elektrofischerei the possibilities of managing standing waters and river courses with the help of clectricity). In

General principles of electro-fishing: the electrical field in water, the physiological effects of electrical currents, & the means of setting up the currents; methods of electro-fishing, & returns from it.

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Morice, J. (1958) - 581310 Rov. Trav. Off. Poches marit., 22(1):85-104 Animaux marins comestibles des Antilles françaises (Oursins, crustacés, mollusques, poissons, tortues et cétacés) (Edible marine animals of the French Antilles (Sea-urchins, crustaceans, molluscs, fishes, turtles & cetaccans))

A catalogue of spp. arranged by families with notes & occurrence, methods of capture.

Flomming, H. (1958) Z.Fisch., 7(1/2):91-152 581313

Untersuchungen über die Bluteiweisskörpe gesunder und bauchwassersuchtskranker (Investigations of the blood protein-bodies in healthy and dropsical carp). En

The significance of blood plasma- & serum protoin methods of research for early diagnosis & investigation of carp infected with dropsy; description of the methods, & some results.

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581311 Morico, J. (1958) Rev. Trav. Off. Pôches marit., 22(1):105-14 Langoustes et scyllares des Petites Antilles (Spiny lobster and scyllarids of the Lesser Antilles)

An illustrated key for the determination of the spp. of the genera Scyllarides, Palinurellus, Justitia, Palinustus & Panulirus.

Bauor, 0. (1958)

581314

Z.Fisch., 7(1/2):153-60 Die Erforschung der Fischkrankheiten in den Sowjetteichwirtschaften und ihre Bekämpfung (The investigation of fish diseases in the Soviet Union and their control)

Review of recent USSR literature on principal fish diseases.

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Ercegović, A. (1957) 581321 Tokioka, T. & L. Bornor (1958) 581324 Pacif.Sci., 12:135-8 Acta adriat., 8(8):130 p. La flore sous-marine de l'Ilot de Two new Doliolids from the eastern (The sub-marine flora of Pacific ocean Jabuka I.). Hr Doliopsoides horizoni sp. n., Doliolina undulatum sp. n. are doscribed. Systematics of algal spp. in this area of the Adriatic; ill; comparative distributions & general floristic conclusions. FA0:glk M FAO:sjh M Yount, J.L. (1958) 581322 581325 Barnard, J.L. (1958) Pacif.Sci., 12:111-30 Pacif.Sci., 12:146-51 Distribution and ecologic aspects of Revisionary notes on the Phoxocephalidac central Pacific Salpidae (Tunicata) (Amphipoda), with a key to the genera Abundance is considered with reference New synonymy for the genus Paraphoxus Sars & listing of usoful specific to physical & chemical factors of the environment; relative abundance of spp. critoria for that genus; new combination is examined & salp abundance in the & new names in the genera Paraphoxus, Hotorophoxus Shoomaker, & Proharpinia aroa is compared with that of total plankton of the area & with salp Schollenberg; zoogeographical reasons fo abundance in other regions of the provisional retention of the gonus Harpiniopsis Stephensen; & new key to Pacific. Distribution is analysed. Ecological niches (relations to food & existing genera of Phoxocophalidae. enemics) are discussed. M FAO:glk M FAO:glk 581323 581326 Iversen, E.S. & E.E. Hanoda, Y. (1958) (1958)Hoven Pacif.Sci., 12:152-6 Pacif. Sci., 12:131-4 Studies on luminescence in marine snails Some trematodes of fishes from the contral equatorial Pacific Observations on luminous phenomena, & on the effects of temperature; structure & histology of the luminous organ, & Systematic list with notes on host, location of infestation, locality at biochemistry. which taken, & infection rates.

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Banner, A.H. (1958) Pacif.Sci., 12:157-69 Contributions to the knowledge alphoid shrimp of the Pacific III. On a small collection frogilbert Islands Systematic list with ocologica notos.	Ocoan - m Onotoa,	Bowman, T.E. (1958) Pacif.Sci., 12:181-2 First Pacific record of the Whal genus Syncyamus (Amphipoda: Cyami Specimens from a dolphin taken r Tabogvilla Island.	ldao)
FAO:glk	M	FAO:glk	M
Bary, B.M. (1958) Pacif.Sci., 12:170-80 Records of scattering layers f Zealand scas	581328 rom Now	Anonymous (1958) Scionco, 127(3288):23 Surface measurement of gravity i	. 581331 .n ocean
Tabulation, illustration & dis of records.	cussion	Note on first successful surface measurement of gravity in open s J.L. Worzel from U.S.S. COMPASS	sea by
FAO:glk	M .	FAO:sjh	M
Nakamura, E.L. (1958) Pacif.Sci., 12:181 An unusually large salp	581329	Klein, L. (1958) Research, Lond., 11:214-20 Chemical aspects of river pollut	581332
Thetys vagina Tilesius taken a N, & 157°46' W.	t 22°15'	Considers the various sources of pollution; chemical methods of a & treating sewage & trade wastes outlined - the biological method considered previously (580375), permissible limits of impurities rivers are discussed.	ssessing are s were & the
FAO:glk	M	FAO:sjh	F
FAO/58/7/5823	:	1(5):25	

U.K. Ministry of Agriculturo, 581333 Fisheries & Food (1958)

London, 43 p.
Herring Industry Board twenty-third
Annual Report for the year ended 31st
Docember 1957

Composition of board, arrangements between it, catches & shore-based industry, marketing, production, research & development with regard to Clupea harongus fishery in N. Sea, public relations, accounts. Statistical tables for fishing operations, landings & values; fleet composition, disposal of catches; international trade; applications for credit.

FAO: sjh

Svetovidov, A.N. (1957) 581336 C.R.Acad.Sci.U.R.S.S., 117:910-3 O chornomorskikh vidakh roda schorpacna (Black Sca species of the genus Scorpacna)

Description of spp. found in the Black Sea, the only native sp. being, presumably, <u>S. porcus</u>; other spp. are probably migratory.

FAO:sjh

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Canada. Dominion Bureau of 581334 Statistics (1958)

Ottawa, 93 p.
Fisheries statistics of Canada (Nova Scotia), 1956. En Fr

Yearly landings (quantities & values) by spp., region, type of craft & gear; inventory & operations of equipment; employment, processing, trade, bounties paid.

FAO:sjh

Bekker, V.E. (1957) 581335

C.R.Acad.Sci.U.R.S.S., 117:889-91

O vliianii uslovii sushchestvovaniia na razvitie gonad i portsionnost ikrometaniia u zolatogo karasia
(Carassius carassius L.) (Dovelopment of gonads & amount of spawn rolease in Carassius carassius (L.), as affected by living conditions)

Experiments with an over-stocked pond & the effect on reproduction, as compared with a normally stocked similar pond (in the proportion of 15:2). Adopted indices: maturity coefficient, new generations & vitellogenesis.

FAO: go F

Schaefer, M.B. (1957) 581337

Bull.interam.trop.Tuna Comm., 2:247-85

A study of the dynamics of the fishery
for yellowfin tuna in the eastern
tropical Pacific ocean. En Es

Statistics of fishing intensity & resultant catch encompassing different levels of fishing intensity for the period 1934-1955 are examined in the light of some theory of population dynamics to provide more exact estimates of the relation of fishing effort to population abundance & catch.

FAO:hr

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Prévot, A.-R. (1958) 581338

Bull.Inst.océanogr., Monaco, (1114):22 p.

Utilité de la bactériologie marine dans
le présent et l'avonir (The usofulness of marine bacteriology in the
present and future). En

A roview of the development of marine bacteriology, & an appraisal of its value as a field of research.

FAO:hr

Shishkina, 0.V. (1957) 581339 C.R.Acad.Sci.U.R.S.S., 116:259-62 Khloridno-Natrii-Kaltsievyo vody v chetvortichnykh otlozheniiokh chernogo moria (Chlorido-sodium-calcium water of quaternary deposits of the Black Soa)

Mothods employed, & chemical analysis of water contained in silt samples.

Budanov, V.I. & al. (1957) 581342 C.R.Acad.Sci.U.R.S.S., 116:1005-8 Sovromennye vertikalnye dvizheniia boregov dalnevostochnykh morei (Vertical displacement of the Far-East sea shoros in modern times)

Importance of comparing the results of different methods of appraisal of elements, which determine the vertical displacement of sea shores.

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Aibulatov, N.A. (1957) 581340 C.R.Acad.Sci.U.R.S.S., 116:281-3 Oprodolonic moshchnosti potokov poschannykh nanosov u morskikh berogov (A method for determining the thickness of streams of suspended sand alluvium along the sea shore)

Colouring of sand with luminous organic substances.

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Coblonts-Mischke, O.I. (1957) 581343 C.R.Acad.Sci.U.R.S.S., 116:1029-32 O produktsii fitoplanktona v severozapadnoi chasti Tikhogo okoana vesnoi 1955 g. (Production of phytoplankton in the N-E of the Pacific in the spring of 1955)

Samples exposed in transparent & darkened phials, both on the shipdock & at various depths. Accumulation of organic carbon & liberation of exygen were studied on different samples in different conditions.

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Detlof, T.A. (1957) 581341
C.R.Acad.Sci.U.R.S.S., 116:341-4
Kortikalnyo granuly i veshchostva,
vydeliaiushchiosia iz animalnoi chasti
iaitsa v period aktivatsii u osetrovykh
ryb (Cortical granules & substances
secreted from the animal portion of
the egg at the period of activation
in Acipenseridae)

Doscription & methods used for disclosing the nature of substances.

Pavlov, P.I. (1957) 581344
C.R.Acad.Sci.U.R.S.S., 116:1039-40
O pomosi loshcha i plotvy (Abramis brama danubii Pavlov & Rutilus rutilus Linnó)
iz limana Kitai (A hybrid botwoen
Abramis brama danubii Pavlov & Rutilus
rutilus L. from the Kitai ostuary)

Description of three specimens of natural hybrids between bream & reach.

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Gusev, A.M. & N.P. Rusin (1957) 581345
C.R.Acad.Sci.U.R.S.S., 117:68-71
Metercologicheskaia kharakteristika
vnutrennego raiona vostochnoi Antarktidy
po nablindeniiam na stantsii Pionorskaia (Moteorological description
of the inner region of East Antarctic
according to observations carried out
at the Pionorskaia station)

Standard meteorologic, actinometric aerologic & glaciologic observations.

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Krainshkina, L.S. (1957) 581348
C.R.Acad.Sci.U.R.S.S., 117:542-4
Gistofisiologichoskaia kharakteristika
organov pishchovarikolnoi sistomy
lichinok sovringi na razlichnykh etapakh
razvitiia (Histophysiological
description of the organs of the
alimentary system in larvae of Acipensor
stellatus Pallas at various stages of
their development)

Study of the various stages of development, with regard to nutrition of sturgeon larvae.

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Klumov, S.K. (1957) 581346
C.R.Acad.Sci.U.R.S.S., 117:153-6
Berogovyo lozhbishcha katikov i mosta
obitania kalanov na Kurilskikh ostrovakh i orientirovochnoo opredolonio ikh
chislennosti (Coastal rookorios of
Callorhinus ursinus & habitat of Inhydra
lutris at the Kuril Islands, & a
tontative appraisal of their number)

Doscription of sea-ottor habitat & furscal (considered untill now as extermination on the Kuril Islands) rockeries, discovered by an exploring party sent to appraise the number of sea-liens. FAO:go Lineikin, P.S. (1957) 581349 C.R.Acad.Sci.U.R.S.S., 117:971-4 K dinamiko baroklinnogo sloia v okeane (Dynamics of the baroclinic layer in the ocean)

Determination of the characteristic depth of penetration of gradient-convective currents in the ocean.

FAO: go

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Romanova, G.P. (1957) 581347 C.R.Acad.Sci.U.R.S.S., 117:157-60 Kishechnyo parazity segoletkov sudaka Rybinskogo vodokhranilishcha (Intestinal parasites of young Lucioperca sandra in the Rybinsk water reserveir)

Description of spp. & numbers of parasites found in digestive organs of perch-pike fingerlings.

Sarkisian, A.S. (1957) 581350 C.R.Acad.Sci.U.R.S.S., 117:975-8 K voprosu o nostatsionarnykh votrovykh techniakh v baroklinnom okeane (Unsteady wind currents in a baroclinic ocean)

Attempt to account for baroclinity, following Eckman's theory. Makes use of the density diffusion equation. The problem is reduced to one equation.

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Zelikman, E.A. (1958) 581351 C.R.Acad.Sci.U.R.S.S., 118:201-4 O sozrevanii gonad i plodovitosti samok u massovykh vidov Barentsovomorskikh evfauziid (Maturation of gonads & fomalo fertility of Barents Sea Euphasiidae)

Indirect method of appraisal of plankton reserves, consisting in the comparison of female fortility with the amount of spawn in the plankton.

FAO: go

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Dyk, V. (1958)

Biologickó Práce, 4(2):32 p.

Lipan podhorní (Thymallus thymallus (L.))
1758/ v různých nadmořských polohách
CSR a Zakarpatskó Ukrajiny SSSR
(Grayling (Thymallus thymallus L.) in
tho mountain-lakos with various altitudes
in Chechoslovakia & Karpatho-Ukraina
SSSR).

Ru Do

Description of the flora and fauna in various mountain-lakes where the gray-ling occurres, & conclusions about the requirements of environmental conditions by grayling.

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Sorokin, Iu.I. & A.N. 581352 Meshkov (1958) C.R.Acad.Sci.U.R.S.S., 118:205-7

C.R.Acad.Sci.U.R.S.S., 118:205-7
Primenenic radioaktivnogo ugleroda C14
dlia opredelenia usvoiaimosti protokokkovykh vodoroslei motylei Tendipos
plumosus (Assimilation of Protococcus algao by Tendipes plumosus,
determined by applying radioactive
carbon C14)

Description of experiments, showing the advantages of this method for studying alimentary relations of aquatic organisms.

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581353

Svärdson, G. (1957) 581355 Svonsk FiskTidskr., 66:37-42 Skoppträsklöjan (Vondace in tho lake Groat Skoppträsk)

Note on the occurrence of small grown population of vendace in the lake, the growth of vendace, & its morphological characteristics (especially number of gillrachers), variations in strength of year class.

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Shtefan, M. (1958) Zool.Zh., 37:222-8

Fiziologicheskii analiz vzaimosviazi mezhdu gozoobmenom i stainym povodeniem u nekotorykh morskykh i prosnovodnykh ryb (Physiological analysis of the interrelation between the gas exchange & shoal behaviour of certain marine & freshwater species). En Measurements of oxygen consumption by grogarious fish when isolated, within reach of, or united to the shoal. According to species, the grogarious instinct is stimulated by optical or alfactory organs.

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Nordin, S. (1957) 581356 <u>Svensk FiskTidskr.</u>, 66:42-3 Oringlok i saltvatten vid Gotland (Spawning of trout in the salt water by Gotland)

Notes on the spawning of trout in shallow water in the Baltic Sea.

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Svärdson, G. (1957) 581357 Svensk FiskTidskr., 66:89-90 Motgift mot rotonon (Antipoison against rotenon) Notos on the use of potassium permanganate for exidation of rotenon.	Hult, J. (1957) Svensk FiskTidskr., 66:105-8 Lönar sig fiskodlingen? (Is fish- culture profitable?) Review of the problems of fish-culture for the purpose of stocking of natural waters in Sweden.
FAO:tl F	FAO:tl F
Curry-Lindahl, K. (1957) 581358 Svensk FiskTidskr., 66:91-4 Om rödingen i rinnande vatton (On char in running water) Notes on the occurrence of char (Salmo alpinus) in brooks & rivers in Northern Sweden.	Agnedal, PO. (1957) 581361 Svensk FiskTidskr., 66:108-13 Fiskestatistik i sjön Erkon 1952-1956 (Fisheries statistics in the lake Erken, 1952-1956) Yield of fish by spp. & year, & discussion on the year-to-year changes in yield.
FAO:tl F	FAO:tl F
Ahl, E. (1957) Svens FiskTidskr., 66:94-7 En kräftfiskoundersökning i Ljungan (A grayfish investigation in the river Ljungan) Notes on the abundance & catches of gray-fish in the river.	Borzinz, B. (1957) 581362 Svensk FiskTidskr., 66:118 Fonklippningsförsök med bäckröding (Fin cutting test with rainbow trout) Notes on the possibilities for tagging of fish by cutting of fins and the regeneration of fins by Salmo fontinalis.
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Anonymous (1958) 581363 h.k. (1958) 581366 Dansk FiskTid., 76:217 Dansk FiskTid., 76:34-8 Totaludbyttet af dansk fiskeri viste ny Uenighed mellem havforskore på on betydelig fromgang i året 1957 sildekonference i Bremen (Disagree-(Total yield of Danish fishery showed a ment between marine scientists on a new considerable progress in the year herring Conference in Bromon) 1957) Notes on a discussion of over-fishing Proliminary roview of Danish fisheries problems in the North Sea. statistics, including notes on fishingeffort. FAO: tl M FAO:tl Bortolson, E. (1958) Anonymous (1958) 581364 581367 Dansk FiskTid., 76:241 Dansk FiskTid., 76:189 Hvillingoundorsøgelserne i Nordsøen m.v. Do internationale sildemaerkninger og industrifisheriets fangststatistik (Whiting investigations in the North Soa) (International tagging of horring & the catch statistics of "industrial fishery" (fishery for reduction plants) Notes on the tagging of whiting, & race invostigations. Notes on the results of herring tagging in the North Soa, 1957, & the influence of Danish industrial fishery on the herring stocks. FAO: tl M FAO: tl M 581365 581368 Anonymous (1958) Anonymous (1958) Dansk FiskTid., 76:199-200 Dansk FiskTid., 76:265-6 Do fiskoribiologisko undersøgelsor Undersøgelserne omkring Faorøerne og i angaondo Nordsørødspaetter m.v. nordligere havemråder (Investigations (Fisheries biological investigations on around Facroers and in the northern North-Soa plaice) soa areas) Short review of the results of Danish Notes on the year-class strengths & occanographic & fisheries biological tagging of plaice. investigations in the North-Atlantic, & notes on changes taking place in the last years in this area. FAO:tl M FAO: tl M

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Anonymous (1958) 581369 Dansk FiskTid., 76:275-8 Undersøgelserne i de ferske vande (Investigations in fresh water) Short review of the Danish investigations in inland waters with the emphasis on pollution problems.	A.F. (1958) Dansk FiskTid., 76:297-8 Fiskoribiologi og rødspacttor (Fisheries biology and the plaice) Discussion on the rentability of transplantation of plaice in Danish waters.
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Anonymous (1958) 581370 Dansk FiskTid., 76:287-8 Undersøgelse af giftstoffers indvirken på fisk (Investigations on the influence of poisons on fish)	Welle-Strand, E. (1958) 581373 Dans.FiskTid., 76:310 Vima opsøgo fiskene siger Finn Devold (We must search for fish, says Finn Devold)
Short review of the investigations conducted in Danish Physiological Laboratory, e.g. (the influence of chlorination, radioactive pollution, treatment with hormones etc. on fish).	Notes on Mr. Finn Devold's plans for intensification of the survey of off-shore fisheries resources.
FAO:tl MF	FAO:tl M
Anonymous (1958) 581371 Dansk FiskTid., 76:289-93 Fiskeri- og havundersøgelserne i farvandene ved Grønland (Fisheries and oceanographic investigations off Greenland)	Toudouze, G.G. (1958) 581374 France pêche, 3(18):16-8 Eaux territoriales, plateau continental et avenir de la pêche (Territorial waters, continental shelf & the future of fisheries)
Short review of Danish investigations with emphasis on the size of cod stocks.	A brief summary of this problem.
FAO:tl M	FAO:sjh M

International Commission for the 581375
Northwest Atlantic Fisheries (1958)
Spec.Publ.I.C.N.A.F., (1):339 p.
Some problems for biological fishery
survey and techniques for their solution
- A symposium held at Biarritz, France,
March 1-10, 1956

A report of the Symposium, with full report of the various working parties & selected contributed papers, references & annotations to which are given as 581376 to 581417.

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papers
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Martin, W.R. (1958)

Spec. Publ. I. C. N. A. F., (1):17-26

catches of the salt cod fleet

Working party II - Characteristics of

Convenor's report on this fishery -

development of fishing equipment; review of landings statistics; cod abundance &

sizes captured; conversion factors for

processed to whole fish; general biol-

ogical observations; proposed research

gear solution, population dynamics, catch prediction. List of contributed

program relating to statistics, sampling

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581378

Walford, L.A. (1958) 581376 Spec.Publ.I.C.N.A.F., (1):5-12 Chairman's summary of discussions

Background for discussion, subjects identified; general conclusions regarding research programs especially in the ICNAF area.

Holt, S.J. (1958) 581379
Spec.Publ.I.C.N.A.F., (1):27-50
Working party III - Population dynamics:
devise means of roducing the time
required to obtain data necessary for
making assessments of stocks, especially
those required as the basis for a
program of conservation

Convenor's report on discussions of this subject, conclusions & recommendations; list of contributed papers.

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Taylor, C.C. (1958) 581377

Spec.Publ.I.C.N.A.F., (1):13-6

Working party I - The problem of sampling oceanic stocks which are partly demersal, partly pelagic, whose distribution differs with size and ago, and which are fished by diverse techniques and by diverse countries

Convenor's notes on papers presented, $\hat{\omega}$ discussion of them, with recommendations regarding this problem.

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Beverton, R.J.H. & J.A. 581380
Gulland (1958)
Spec.Publ.I.C.N.A.F., (1):51-66
Working party III - Mortality estimation
in partially fished stocks

A factor in planning population research is extent to which fishing is influencing stock. One method of obtaining information involves estimation of magnitudes of fishing & natural mortality. This contribution to the working party on population dynamics is concerned with estimation of mortality, & use of these data for purposes of assessment, when only a part of a stock is fished.

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Graham, M. (1958) 581381 Spec.Publ.I.C.N.A.F., (1):67-8 Working party III - Fish population assessment by inspection

This contribution to working party on population dynamics suggests that appearance of <u>Tilapia esculenta</u> in L. Victoria, gives clue to average age of fish & hence to degree of exploitation of stock.

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Holt, S.J. (1958)

time factors imvolved

Spec. Publ. I. C. N. A. F., (1):77-95

Working party III - The evaluation of

population dynamics attempts to define universal measures of potential yield

fisheries resources by the dynamic analysis of stocks, and notes on the

Contribution to working party on

from a resource. Gives examples & discusses the requirements from data.

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581384

Gulland, J.A. (1958) 581382 Spec.Publ.I.C.N.A.F., (1):69-70 Working party III - Notations in fish population studies

Author's abstract of paper which formed basis for standard notation recommended by working party on population dynamics.

Le Cren, 2.D. (1958) 581385 Spec.Publ.I.C.N.A.F., (1):97-104 Working party III - Some observations or methods of speeding up fish population assessments

Contribution to working party on population dynamics reviews & discusses some general aspects of the problem.

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Gulland, J.A. (1958) 581383 Spec.Publ.I.C.N.A.F., (1):71-6 Working party III - Sampling of semioceanic stocks of fish

Contribution to working parties on population dynamics & sampling on the needs for data, & their analysis to give unbiased estimates of stock size & composition, & showing that required sampling methods depend on details of use to which data obtained are to be put.

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Walford, L.A. (1958) 581386

Spec.Publ.I.C.N.A.F., (1):105-10

Working party IV - To make the best use of the scientific talent, arrange that men with special skills are most effectively used for the needs of the whole commission. This may require allocating tasks and materials

Convenor's report with recommendations regarding collaboration on statistics & sampling, use of research vessels & equipment, & need for scientific meetings. Costs of fisheries research & their allocation as between participating countries.

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581387 Graham. H.W. (1958) Parrish, B.B. (1958) 581390 Spec. Publ. I. C. N. A. F., (1):111 Spoc. Publ. I. C. N. A. F., (1):151-78 Working party V - Effects of haddock Working party VI - Some notes on mesh regulation in subarca 5 methods used in fishery research Convenor's report on this topic. A review of fish & mosh measuring mothods; conduct of gear selection experiments, age-determination of fish, growth studies. Idontification of questions requiring discussion & test. SJH:sjh M SJH:sjh MF Gulland, J.A. (1958) 581388 581391 Parrish, B.B. (1958) Spoc.Publ.I.C.N.A.F., (1):179-90 Spec.Publ.I.C.N.A.F., (1):113-38 Working party VI - Comparison of Working party VI - Age determination of cod by fin rays and otoliths European and North American techniques of measuring nets, of reading ages of fish and of studying growth Contribution to working party on comparison of tochniques reporting Convenor's report on this topic, subjects experiments to study differences between methods & between observers. dealt with general considerations, proceedings of discussions & recommendations for standardization & further experiments. List of contributed papers. M SJH: sjh M SJH:sjh Clark, J.R. (1958) 581392 Kesteven, G.L. (1958) 581389 Spec. Publ. I. C. N. A. F., (1): 191-2 Spec. Publ. I. C. N. A. F., (1):139-49 Working party VI - Consistency of scale Working party VI - Some considerations reading concerning the instrumentation for fishery biology Contribution to working party on comparison of techniques reporting an A review of methods, with tentative experiment to test observer differences proposals for development of semiin reading scales of Goorges Bank automatic measuring instruments. haddock. SJH:sjh MF SJH:sjh

Jensen, A.C. & J.R. Clark (1958) 581393 Trout, G.C. (1958) 581396 Spec. Publ. I. C. N. A. F., (1):193-7 Spec.Publ.I.C.N.A.F., (1):207-14 Working party VI - Time of formation of Working party VI - Otoliths in age scale annuli determination Contribution to working party on Contribution to working party on comparison of techniques reporting a comparison of techniques dealing with study of Georges Bank haddock samples. growth of cod in the N. Atlantic, & especially in the Arctic. SJH: sjh M SJH:sjh M Kohler, A.C. & al. (1958) 581394 Kelly, G.F. & R.S. Wolf (1958) 581397 Spec. Publ. I. C. N. A. F., (1):199 Spec. Publ. I. C. N. A. F., (1):215 Working party VI - Haddock scale-Working party VI - Age and growth of otolith comparisons redfish, Sebastes marinus (Linnaeus), in the Gulf of Maine Abstr. of contribution to working party on comparison of techniques reporting Abstract of contribution to working comparative observations by U.S. & party on comparison of techniques. Canadian biologists. SJH: sjh M SJH:sjh M 581398 Saetersdal, G. (1958) 581395 Kotthaus, A. (1958) Spec. Publ. I. C. N. A. F., (1):201-6 Spec. Publ. I. C. N. A. F., (1):217-22 Working party VI - Ago and growth of Working party VI - Use of otoliths and scales of the Arctic haddock rodfish, Sobastes marinus (L.) Study of age-determination & growth Contribution to working party on from Finnmark Bank & Rostbank samples; comparison of techniques giving discussion of Lee's phenomenon appraisal of data for N.T. Atlantic. (contribution to working party on comparison of techniques).

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Rasmusson, B. (1958) 581399 Taylor, C.C. (1958) 581402 Spec. Publ. I. C. N. A. F., (1): 223-5 Spec. Publ. I. C. N. A. F., (1):243-51 Working party VI - Notes on the otoliths Working party VI - A note on Lce's of S. marinus and S. viviparus phenomenon in Georges Bank haddock Contribution to working party on Contribution to working party on comparison of techniques discussing comparison of techniques reporting growth rates of these spp. in analysis of scalo readings & back-N. Atlantic. calculations. SJH:sjh M W SJH:sjh von Brandt, A. (1958) 581403 Sandeman, E.J. (1958) 581400 Spec. Publ. I. C. N. A. F., (1):253-64 Spcc.Publ.I.C.N.A.F., (1):227 Working party VI - Measurements of Working party VI - Growth of young meshes of trawl nets redfish Contribution to working party on Contribution to working party on comparison of tochniques reviewing comparison of techniques giving data on methods, manufactures, specifications & growth of fish in one year class of needs, gauges, effect of pressure, Schastes marinus. shrinkage & stretching. M SJH:sjh SJH:sjh M 581404 Went, A.H.J. (1958) Jones, R. (1958) 581401 Spec. Publ. I. C.N. A. F., (1):229-42 Spec. Publ. I. C. N. A. F., (1):265-6 Working party VI - Lee's phenomenon of Working party VI - Measurement of the mesh of nets "apparent change in growth-rate" with particular reference to haddock and Contribution to working party on plaice comparison of techniques proposing use of the "knots per unit length" Contribution to working party on criterion. comparison of techniques reporting study

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of scale & otolith readings of these

spp. in N.E. Atlantic.

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Lucas, C.L. (1958) 581405 Spec.Publ.I.C.N.A.F., (1):267-74. Working party VII - Differentiation of fish stocks

Convenor's report of working party on this subject, which considered the importance of planktonic stages to the division or inter-mingling of groundfish stocks; the identification of unit stocks in general; & the spp. & varieties of Sebastes. Recommendations for research; list of contributed papers.

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Colton, J.B., Jr. (1958) 581408

Spec.Publ.I.C.N.A.F., (1).279

Working party VII - Report on studies of fluctuations of year-class strength of haddock

Abstract of contribution to working party on differentiation of fish stocks, giving analysis of egg & larvae surveys in N.W. Atlantic.

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Corlett, J. (1958)

Spec. Publ. I. C. N. A. F., (1) :281-8

Contribution to working party on

published data & reporting new

Working party VII - Distribution of

larval cod in the western Barents Sea

differentiation of fish stocks review

observations, all being summarized by

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581409

Alvarino, A. (1958) 581406 Spoc.Publ.I.C.N.A.F.,(1):275 Working party VII - Zooplankton from Newfoundland waters

Abstract of contribution to working party on differentiation of fish stocks reporting occurrence of zooplankton in surface hauls, 1955, incl. larvae of Mallotus villosus & eggs of Gadus callarias, Hippoglossoides platessoides & Limanda ferruginoa.

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maps.

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Colton, J.B., Jr. (1958) 581407 Spec.Publ.I.C.N.A.F., (1):277 Working party VII - Adaptability of the hardy plankton recorder to research ship studies

Short abstract of contribution to working party on differentiation of fish stocks, dealing with sampling methods for larval fishes.

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Fraser, J.H. (1958) 581410
Spec.Publ.I.C.N.A.F., (1):289-310
Working party VII - The drift of the planktonic stages of fish in the north-cast Atlantic and its possible significance to the stocks of commercial fish

A review contribution to working party on differentiation of fish stocks, with special reference to spp. of Gadus, Pleuronectes, Nansenia, Stomias, Brosme, Molva, Merluccius, Myctophum, Maurolicus & Bathylagus, as well as occurrence of rare genera such as Mela.

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Stoole, D.H. (1958) 581411
Spec.Publ.I.C.N.A.F., (1):311
Working party VII - The redfish
(Schastes marinus (L.)) in the western
Gulf of St. Lawrence

Abstract of contribution to working party on differentiation of fish stocks doaling with size at maturity, meristic characters, distribution & feeding of this sp.

Floming, A.M. (1958) 581414

Spec.Publ.I.C.N.A.F., (1):331

Working party VII - Differentiation of cod groups in the Newfoundland and Labrador region

Abstract of contribution to working party on differentiation of fish stocks; discusses significance of differences in vertebral number & in degree of parasitization by the nematode Porrocaccum & its relation to the adult host, Phoca vitulina.

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Taning, A.V. (1958) 581412

Spec.Publ.I.C.N.A.F., (1):313-25

Working party VII - Observations on supposed intermingling or a certain connection between some stocks of boroal and subarctic demorsal food fishes of the eastern and western Atlantic

Contribution to working party on differentiation of fish stocks, giving northern hemisphere distribution maps for spp. of the genera Molva, Micromesistius, Morluccius, Urophycis, Brosme, Gadus, Hippoglossus, Pleuronectes. Reviews distribution data for other spp., especially of commercially exploited stocks.

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Clark, J.R. (1958) 581415 Spec.Publ.I.C.N.A.F., (1):333 Working party VII - The identification of haddock stocks based on vertebral enumeration

Brief abstract of contribution to working party on differentiation of fish stocks.

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Aurich, H.J. (1958) 581413

Spec.Publ.I.C.N.A.F., (1):327-30

Working party VII - Causes of the changes in the stocks of some summer spawners, in the southern North Sea - A working hypothesis

Contribution to working party on differentiation of fish stocks, reviewing observations of spawning areas of Clupea pilchardus, Engraulis encrasichelus, Solea vulgaris, Caranx trachurus & Scomber scombrus. Comment on associated changes in distribution of Sopia officinalis & Lepas fasciculatus.

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Kolly, G.F. & T.W. Martin (1958) 581416 Spoc.Publ.I.C.N.A.F., (1):335-7 Working party VII - Variations in body proportions of rodfish from the Gulf of Maine, Nova Scotian Banks and the Great Banks

Contribution to working party on differentiation of fish stocks describing morphometric studies of Sobastes marinus & S. viviparus from the N.W. Atlantic.

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Rollefsen, G. (1958) Spec.Publ.I.C.N.A.F., (1):3 Working party VIII - Review ledge about the Atlantic hal Brief report by convenor of party, with general conclus: proposals; list of contribute	of know- libut working ions &	Cotton, C.A. (1958) Geogr.J., 124:223-31 The rim of the Pacific Discussion of topology, morphol evolution of the Pacific basin.	581420 ogy &
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Kidson, C., A.P. Carr & D.B. Smith (1958) Geogr.J., 124:210-8 Further experiments using ramethods to detect the movement shingle over the sea bed and Ill. description of apparatumethods & results obtained east coast.	ndioactive ent of d alongshore	van Rooy, M.P. (Ed.) (1957) Protoria, 240 p. Meteorology of the Antarctic Incl. chapters on the cceanogra the southern ocean & climatelog ocean area.	
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Worrall, G.A. (1958) Geogr.J., 124:219-22 Deposition of silt by the in waters of the Nile at Kharte Describes results of analyst menthly water & sediment san March 1954 - February 1957.	rrigation oum is of	Lamb, H.H. (1958) Geogr.J., 124:256-7 Motoorology of the Antarctic Review of 581421.	581422

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Odoll, N.E. (1958) Gcogr.J., 124-287-8 Professor Léon William Collet Obituary & short biography of the geologist, with account of his with physical limnology.		Geogr.J., 124:296 Lowis Morris (1701-65), surveyor geographer Letter commenting on Robinson, A 1957, (581425) with reference to of Morris's activities as a marin surveyor.	·H·W·, montion
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Mackay, J.R. (1958) Geogr.J., 124:294-5 Arctic "vegetation arcs" A letter commenting on "stairca: & water course patterns describe Ives, R.L. (1941) J. Geomorphol. 285-96, in relation to papers of Macfadyen, W.A. (1950) Geogr.J. 199-211 & Greenwood, J.J.G.W. (Geogr.J., 123:465-75.	ed by ., 40 f , 116:	Gorasimov, I.P. (1957) Bull.Acad.Sci.U.R.S.S.(Géogr.), (The present situation with regathe scientific study of the naturesources of the U.R.S.S.).	rd to
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Robinson, A.H.W. (1957) Geogr.J., 123:453-4 Marine surveying in Britain dury seventeenth and eighteenth cent		Bogorov, V.G. & al. (1957) Bull.Acad.Sci.U.R.S.S.(Géogr.), (The oceans of the world and the natural resources). Ru	581428 (5) ir
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Bull.Acad.Sci.U.R.S.S.(Googr.), (6) Bull. Acad. Sci. U.R.S.S. (Géogr.), (6) (The combat against line erosion on the (Changes in the longitudinal profiles left bank of the Don and its importance of the affluents of lake Sevan in for the prevention of sand-silting in connection with the lowering of its the Don and the Tsimlyanskiy). level). Ru Ţ F Storniakov, V.A. (1957) 581433 Nazarov, G.B. (1957) 581430 : Bull. Acad. Sci. U.R. S.S. (géogr.), (6) Bull. Acad. Sci. U.R. S. S. (Géogr.), (Flow in the upper Yonisci basin). (An analysis of river flow factors and an assessment of their influence on industrial activity in the southern Volga region). \mathbf{F} F Zaletaiev, V.S. (1957) Ioganson, U.V. (1957) 581434 581431 Bull. Acad. Sci. U. R. S. S. (Géogr.), (6) Bull.Acad.Sci.U.R.S.S. (Géogr.) (High water silting in the river Kure (Changes in the bird population in tho on 8 August 1955). north-eastern part of the Caspian as affected by fluctuations of the sea level).

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Bylinskii, M.N. (1957)

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Dubyanskii, V.A. (1957)

Seryahova, L.A. (1957) Bull. Acad. Sci. U.R. S. S. (Géogr.), (6) (Assessment of evaporation and its ratio to irrigation).

Mišík, V. (1958) 581438 Biológia, 13:219-22 Ostračka lososovita (Microptorus salmoides Lacépède 1802) v Dunaji (Microptorus salmoidos Lacópodo 1802 in the Danube). Ru

Description of the species found in Danube in the vicinity of Sturovo.

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Gakkel', Y.Y. (1957) 581436 Bull.All-Un.googr.Soc., (6) (The continental shelf as a geographical) zone of the Arctic ocean).

Atlantic States Marine Fisherics Commission

New York, 79 p. Sixteenth annual report of the Atlantic States Marine Fisheries Commission to the Congress of the United States and to the Governors and Logislators of the fifteen compacting states

Membership of the Commission, the state of the Commission and the activities of its sections; appendices dealing with legislation, accounts, activities of technological & biological sections; summary statements of clam and shad investigations, results of striped bass programme.

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Kubičck, F. (1958) 581437 Biológia, 13:190-202 K poznání zooplanktonu velkého a malého Vihorlatského jezera (To the knowledge of zooplankton of the Small and Great lake Vihorlat). Ru

List of the spp. found & their horizontal & vertical distribution, with notes on seasonal variations.

El-Gedawi, I. (1958) Ll-Felaha, Cairo, 38(1) (Egyptian fresh water fisheries).

Survey of the fresh water area & its

fish production. Tilapia constitutes 60-80% of production. Points out danger of introducing carp in Egypt & the advantago of grass carps in gotting rid of lake weeds, the main food of bilharzia voctors.

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J.Anim. Ecol., 26:251-61

Ecology as an experimental science

References, in the context of the general topic, to introductions of freshwater fishes, overfishing, and whaling; oil-pollution & sea-birds, fouling organisms, theory of population dynamics, grazing of limpets (Patella) on algae.

581441 Macan, T.T. (1957) 58

J.Anim.Ecol., 26:317-42

The Ephemoroptera of a stony stream

Description of Ford Wood Bock in the English Lake District, & its population; comparison with other streams in the district & elsewhere in Europe.

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Fryor, G. (1957) 581442 J.Anim.Mcol., 26:263-86
The food of some freshwater cyclopeid copepods and its ocological significance

Gut contents of several spp. of Macrocyclops, Acanthocyclops, Cyclops & Eucyclops in Britain. Review of literature, & reference to cyclopoids attacking fish; carnivorous & herbivorous forms; food preferences & competition for food by allied spp.; ecological implications of feeding habits & general role of cyclopoids in nature.

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Mackereth, J.C. (1957) 581445 J.Anim.Tcol., 26:343-51 Notes on the Plecoptera from a stony stream

3 year study of Ford Wood Beck in the English Lake district; spp. found, & their abundance, seasonal variation & food.

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Capstick, C.K. (1957) 581443 J.Anim. Tcol., 26:295-315 The salinity characteristics of the middle and upper reaches of the river Blyth estuary

Description of a year's work on a river opening to N. Sea on Northumberland coast; methods & results; tidal & seasonal cycles.

Bossanyi, J. (1957) 581446

J.Anim.Ecol., 26:353-68

A proliminary survey of the small natant fauna in the vicinity of the sea floor off Blyth, Northumberland

'Bottom plankton' at two stations of differing depth & type of bottom was surveyed with a bottom sled net by day & night. Food relationships of 'bottom plankton' are discussed.

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Longhurst, A.R. (1957) J.Anim.Ecol., 26:369-87 The food of the domersal fish African estuary Wookly trawling 4/52 - 3/55 in Loone R.; stemach contents, so other feeding changes.	Sicrra	Drinnan, R.J. (1957) J.Anim.Ecol., 26:441-69 The winter feeding of the system (Haematopus estralogus) on the cockle (Cardium edule) Bird behaviour; cockly population distribution of live ampty she show selective feeding in difference seasons; comparison with accountafeeding on other shellfish; rate intake gut analysis; meat volumelength relation of cockles; number birds.	dible n-size lls cnt s of of food
SJHesjh	ME	SJHesjh	Ĭ. <u>†</u>
Qasim, S.Z. (1957) J.Anim.Ecol., 26:389-401 The biclogy of Contronctus gun (Teleostei) Monthly collections 2/54 - 5/5 shores of Menai Straits; growt breeding, condition, food & fe	5 from	Muirhead-Thomson, R.C. (1957) Nature, Lond., 180:1432-3 Effect of desiccation on the eggs Simulium damnosum, Theobald Describes experiments in Liberia determine viability after artific drying.	to
SJH:sjh	M	GLK : wad	Ł, .
Moon, H.P. (1957) J.Anim. Ecol., 26:403-9 The distribution of Asellus in English lake district and adjoarcas Collections made in several la 1948-56 (stramin net & dredge) A. aquaticus & A. meridianus.	ining kos,	Kay, A. (1957) Nature, Lond., 180:1436-7 The genus Cypraea A proposal based on studies of separts that only this genus be retained for members of the sub-ficypracinac.	
SJH:sjh	\mathbf{F}_{i}	GLK: wad	M

Johnson, A.I. (1957) Nat.in Wales, 3:377-81 Scal marking

581453

Fine, J. & A. Drilhon (1958) 581456 C.R. Acad. Sci., Paris, 246:3183-6. Etude des protéines sériques de Labrus borgylta par électrophorèse de zone sur papier, gélose et gel d'amidon (Study of serum protoins of Labrus

bergylta by electrophoresis using paper, gelatin & amidon gel)

Description of comparisons of these techniques & results obtained.

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581454 Masson, J. (1958) C.R. Acad. Sci., Paris, 246:3108-10 La sécrétion nucléolaire des chremosomes géants chez le chironome (Chironomus plumosus, Insecte diptere) (Nucleolar secretion by giant chromosomes in chironomids (Chironomus plumosus, Dipteran insect))

154 scals (82 cows, 65 bulls & 7 un-

determined) ringed by the West Wales

one from Miro, & one from the French

Island. Seventeen recoveries, 12 locally, 3 from south-west England,

Field Society from Sept. 1956 to March

1957 inclusive, many of them on Ramsey

Cytological observations of salivary gland colls.

TP

Veillet, A. & F. Graf (1958) 581457 C.R. Acad. Sci., Paris, 246:3188-91 Développement post-embryonnaire des gonados et de la glande androgène chez le crustacó amphipode Orchestia cavimana Heller (Post-embryonic development of gonads & androgenous gland of the amphipod crustacean Orchestia cavimana Hollor)

A morphological study of the process of sexual development.

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Nourisson, M. (1958) 581455 C.R. Acad. Sci., Paris, 246:3122-5 Existence d'une scule catégorie d'ocufs choz Chirocophalus stagnalis Shaw (Crustacé Phyllopode) (Existence of a single egg type in Chirocophalus stagnalis Shaw (Phyllopod crustacoan))

Resistance of eggs to drying; their morphology & development.

Ladouco, R., Y. Fauvel & .581458 M. Boury (1958)Sci. Pêche, (58):12 p. Technique de l'épuration des coquillages

Describes methods, equipment procedures & costs of operation.

(Techniques of purification of molluses)

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Rodon, G.I. (1958) 581459 581462 Pettersson, H. & K. Pacif.Sci., 12(1):21-45 Fredriksson (1958) Occanographic and meteorological Pacif.Sci., 12(1):71-81 aspects of the Gulf of California Magnetic spherules in deep-sea deposits Analysis of tomporature, salinity, Results of study of sediment cores from oxygon, wind data. Distribution of all occans & varying dopth. Analysis properties, upwelling, seasonal changes, gives proof of cosmic origin; use to currents, evaporation. estimate rates of sedimentation. FAOssjh M M FAO:sjh Bary, B.M. & al. (1958) 581460 Wieser, W. (1958) 581463 Pacif.Sci., 12(1):46-59 Pacif.Sci., 12(1):106-8 A closing, high-speed plankton catcher Occurrence of Protchydra leuckarti in for use in vertical and horizontal Puget Sound towing Ill. & map of distribution of this Design, construction, trials & hydrozoan. Conditions of habitat & operational use of this equipment. associations of the sp. Measurements of efficiency. FAOssjh M M FAOssjh Wisher, R.L. (1958) 581461 Scottish Homo Department (1958) 581464 Pacif.Sci., 12(1):60-70 Freshw. Salm. Fish. Res., (21):14 p. Ninth annual report of the Supervisory Is the spear of istiophorid fishes Committee for brown trout research used in feeding? Evidence that Makaira spp. rely on Summary of the years work at the swimming speed to overtake prey, rather Freshwater Fisheries Laboratory at than use of spear as a weapon. e.g.: Pitlochry on fish investigation, benthos studies, botany & chemistry. fishes with deformed or without spears attain normal weight for their length; spoar may however have a streamlining function. FAO:sjh M FAO: wad MF

Fry, F.E.J. (1957) 581465
In "The Physiology of Fishes. I.
Metabolism", by M.E. Brown, 1957 (see
1: Suppl. 35, 570207) Academic Press,
Inc., New York,:1-63
The aquatic respiration of fish

A general review under the following headings: the respiratory system; the metabolic rate.

(Card 2)

to some hormones and drugs; the lymph system.

GLK: sjh

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MF

Carter, G.S. (1957) 581466 In "The Physiology of Fishes. I. Motabolism", by M.J. Brown, 1957 (see 1:Suppl. 35, 570207) Academic Press, Inc., New York,:65-79 Air breathing

A general review under the following headings: occurrence; air-breathing organs; physiology.

GLK:sjh

MF

Barrington, E.J.W. (1957) 581469
In "The Physiology of Fishes. I.
Metabolism", by M.J. Brown, 1957, (see
1:Suppl. 35, 570207) Academic Press,
Inc., New York,:109-61
The alimentary canal and digestion

A general review under the following headings:general organization of the digestive system; buccal cavity & pharynx; esophagus; stomach; intestine (mid-gut); rectum (hind-gut); gastric digestion; intestinal digestion; adaptations of enzymes to diet; absorption; the central of digestive functions.

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Mott, J.C. (1957) 581467

In "The Physiology of Fishes. I.

Metabolism", by M.E. Brown, 1957 (see 1:Suppl. 35, 570207) Academic Press,
Inc., New York,:32-108

The cardiovascular system

A general review under the following headings: fragmentary nature of the available information; anatomy; relative dimensions of the cardiovascular system; the myocardium; hemodynamics; the circulatory system & oxygen transport; the influence of environmental factors; nervous centrel of the circulation; the reaction of the piscine circulation

Black, V.S. (1957) 581470

In "The Physiology of Fishes. I.

Metabolism", by M.H. Brown, 1957, (see
1: Suppl. 35, 570207) Academic Press,
Inc., New York,:163-205
Exerction and osmorogulation

A general review under the following headings: stenohaline fishes; anadromous fishes (salmen and lamprey); catadromous fishes (cel); curyhaline teleost fishes; concluding remarks.

GLK:sjh

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Van Ooston, J. (1957) 581471

In "The Physiology of Fishes. I.

Metabolism", by M.E. Brown, 1957 (see
1:Suppl. 35, 570207) Academic Press,
Inc., New York, 207-44

The skin and scales

A general review under the following headings: the skin; scales; selected bibliography.

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hatching.

Smith, S. (1957)

Inc., Now York,: 323-59

In "The Physiology of Fishes. I. Metabolism", by M.H. Brown, 1957 (see

Early development and hatching

1:Suppl. 35, 570207) Academic Press,

A general review under the following

headings: the fish ogg; the effects of

environmental conditions upon development; metabolism of the egg & alevin; developmental mechanics of the fish egg;

MF

581474

Hoar, W.S. (1957) 581472

In "The Physiology of Fishes. I.

Metabolism", by M.E. Brown, 1957 (see
1:Suppl. 35, 570207) Academic Press,
Inc., New York,:246-85

Endocrino organs

A general review under the following headings: anatomical relations & generalized statement of function; growth, development, & metamorphosis; metabolism; reproduction; seasonal cycles of endocrine activity.

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Brown, M.E. (1957) 581475

In "The Physiology of Fishes. I.

Motabolism", by M.J. Brown, 1957 (see
1:Suppl. 35, 570207) Academic Press,
Inc., New York,:361-400

Experimental studies on growth

A general review under the following headings: theoretical considerations; size hierarchy effect; effects of parental factors on growth; growth cycles & changes in growth rate with ago; relation between food & growth; effects of environmental factors on growth; growth hormones; pend culture.

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Hoar, W.S. (1957) 581473

In "The Physiology of Fishes. I.

Metabolism", by M.J. Brown, 1957, (see 1: Suppl. 35, 570207) Academic Press,
Inc., New York,:287-321

The gonads and reproduction

A general review under the following headings: structural relationships; physiology of the prespawning fish; fertilization; gestation.

GLK:sjh

MF

Love, R.M. (1957) 581476

In "The Physiology of Fishes. I.

Metabolism", by M.J. Brown, 1957 (see
1:Suppl. 35, 570207) Academic Press,
Inc., New York,:401-18

The biochemical composition of fish

A general review under the following headings: reliability of methods; factors affecting composition; nature & amount of fish constituents; composition & function; general conclusions; the constituents of fish.

GLK:sjh

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Deichmann, E. (1958) 581477 Allan Hancock Pacif. Exped., 11:253-348 The holothurioidea collected by the VELERO III and IV during the years 1932 to 1954. Part II. Aspidochirota Taxonomic description with the keys. Station list of the collections given.	Gillespic, G.J. (1958) 581480 Trade News, 10(10):9-11 The Yarmouth project Ill. report of undersea studies off Nova Scotia of characteristics for effectiveness of different types of traps for Homarus americanus.
FAO:tl M	FiB:sjh . M
International Commission for the 581478 Northwest Atlantic Fisheries (1958) Halifax, 103 p. Sampling yearbook Vol. 1 for the years 1955 and 1956 Gives tables of length & age frequency distributions of samples of cod, haddock & redfish from catches by ICNAF member countries, using various gears. Introductory analysis of sampling distribution & method.	Anonymous (1958) 581481 Trade News, 10(10):14 Big blast wrocks Ripple Rock Removal of navigational hazard off British Columbia by explosives; observations & experiments on effect of the blast on fish in the vicinity.
SJH:sjh M	FiB:sjh M
Swann, L.G. (1958) 581479 Trade Nows, 10(10):3-8 A contury of B.C. fishing Briof ill. history of British Columbia fisherics & administration & roscarch.	Anonymous (1958) 581482 Trado News, 10(10):19-20 Growth of Peruvian fisheries A note on catches, values & trade.
FiB:sjh MF	FiB:sjh M

Wallace, G.M., L.H. Novman & J.L. Jerrome (19) N.Z.J.Sci., 1(1):23-34 Bacteriological survey of Aucharbours. V. Vertical distrib sewage in Waitemata harbour Investigation of mixing of wa containing sewage with unpoll water by tidal movement. Post methods of dispersal of sewage water by wind & tide are reco	kland ution of tor uted sea ulated c-polluted	Arrecgros, J. (1958) Librairio Payot, Lausanne, 63 p. Coquillages marins (Marino mod An ill. practical guide for the identification of gastropods & lar branchs with instructions for coll	molli-
FAO:tl	MF	FAC ε h $m{r}$	M ;
Barber, N.F. (1958) N.Z.J.Sci., 1(1):35-51 Optimum arrays for direction Design of array of receivers distribution of wave power widirection. Mentions wind gone waves.	to explore th wave	Taning, A.V. (1958) FiskBlad., 50:23-5 Rødspacttoracor (The races of Brief review of the problems of praces in the North Sea & possible influence of environmental factors race characteristics.	laico
FAO: sjh	M	FAO:tl	M
Barrett, J.H. & C.M. Yongo (1958) Collins Clear-Type Press, Lon Collins pocket guide to the s An ill. introduction to the c more easily identified animal of the British shores.	oa shore ommon &	Jensen, A.J.C. (1958) FiskBlad., 50:30-1 Udsigterne for makrelfiskeriet meddrivgarn og dørg i det nordlige Kong Skagerrak i maj, juni, juli 199 (Prospect for mackerel fishery widrift nets and the northern Katter Skagerrak in May, June & July 1958 Prospect of fishery as determined prevailing hydrographical conditions	attogat 58 th gat & 8) from
FAO:hr	M	FAO: tl	M

581489 Costlow, J.D., Jr. & C.G. (1957)Bookhout Biol. Bull., Wood's Hole, 113:224-32 Body growth versus shell growth in Balanus improvisus

Increase of body size through consecutive molting periods, comparison of the relative increase in size of the body with that of the shell, & determination whether or not body growth accompanies an ecdysis.

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Kanwisher, J. (1957)

Biol.Bull., Wood's Hole, 113:275-85

Freezing and drying in intertidal

Discussion of the effect of low

measurements showing depressed

temperatures in freezing a large amount of water in certain algae, &

description of the natural de-hydration

respiration in frozen & dried states of

caused by evaporation, & results of

M

581492

581490 Crowell, S. & C. Wyttenbach (1957) Biol. Bull., Wood's Holo, 113:233-44 Factors affecting terminal growth in the hydroid Campanularia

Contents as per title.

Moulton, J.M. (1957) 581493 Biol.Bull., Wood's Hole, 113:286-95 Sound production in the spiny lobster Panulirus argus (Latroille)

Anatomy of the sound-producing mechanism & description of the behaviour of the spiny lobster in relation to sound production.

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Gross, W.J. (1957) 581491 Biol. Bull., Wood's Hole, 113:268-74 A behavioural mechanism for osmotic regulation in a semi-terrestrial crab

Determination of whether Pachygrapsus crassipos shows proforence for sea water of normal salinity or is able to adapt its osmotic regulation to different salinities.

581494 Phillips, J.H., Jr. & D.P. (1957)Abbott Biol. Bull., Wood's Hole, 113:296-301 Isolation and assay of the nomatocyst toxin of Metridium senile fimbriatum

Developing a method of obtaining purified suspensions of nomatocysts from sea anomones (Actiniaria) in order to obtain a toxic preparation which could be considered to be nematocystic in origin & could be used in studios on the antitoxic response of a variety of marine invertebrates.

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Da Franca, P. (1958) 581495

Trab.Miss.Biol.marit., (17-20):9-26

Contribuição para o conhecimento dos

Stromatoidae de Angola (Contribution to the knowledge of the Stromateidae of Angola)

Diagnostic account of the important characters of <u>Cubiceps niger</u> Nüman, <u>Paracubiceps ledanoisi</u> Bolloc, <u>Mupus pringlei</u> Smith, <u>Stromateus fiatela L.</u>, & Stromateus fasciatus Risso.

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Marques, E. (1958)

Harpacticoida)

distribution.

Hast Africa High

High Commission for 1957

Commission

London, 85 p.

Trab.Miss.Biol.marit., (17-20):133-50

Copépodes dos mares de Angola. II.

of Angolan seas. II. Ciclopoda and

(1958)

The annual report of the East Africa

Contains reports on articles of East African Fishery Research Organization,

Organization, Lako Victoria Fisherics

H.A. Marine Fisheries Research

Systematic list with geographic

Ciclopoida e Harpacticoida

M

581499

581498

(Copepods

De Sousa e Silva, II. (1958) 581496

Trab.Miss.Biol.marit., (17-20):29-85

Nova contribuição para o estudo do microplâncton marinho de Angola

(New contribution to the study of marine microplankton of Angola)

Account of the sampling stations & tabulation of the occurrence of each special systematic description of some of the sppecial taken.

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Service.

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Montoiro, R. (1958) 581497

Trab.Miss.Biol.marit., (17-20):89-130

Hoterosomata de Angola. I. Contribuição para o estudo das famílias Psettodidae, Citharidae, Parachthyidae e Bothidae (Heterosomata of Angola. I. Contribution to the study of the families Psettodidae, Citharidae, Paralichthyidae & Bothidae)

Morphomotry, incl. regressions of body parts & tabulations of some meristic characters, of Psettodes belcheri
Bennett, Citharus linguatula L.,
Citharichthys stampflii Steindachner & Bothus podas Delaroche.

HR:glk

M

Hela, I. & F. Koroleff (1958) 581500 Merontutkimuslait.Julk., (179):67 p. Hydrographical and chemical data collected in 1957 on board the R/V ARANDA in the Barents sea

The cruise route, notes on the methods & techniques used & tabulated hydrographical data including temperatures at standard depths, road from BT, & surface temperatures & salinities taken underway & chemical data (pH, O2, alkalinity, PO₄-P, Si, NO₃-N, NH₃-N, NO₂-N).

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Trout, C.G. (1957) 581501 581503 Fish. Invost., Lond., 21(6):51 p. (Card 2) The Bear Island cod - Migrations and views on the origin & mothods of combating dropsy by this method. movements Contents as per title. F F FAO:glk Breitenstein, W. (1957) 581505 Dürr, W. (1957) 581502 Z.Fisch., 5:325-421 Z.Fisch., 5:443-76 Untersuchungen über die verschiedene Betrachtungen über Reusen der Binnen-Gestalt der Schuppen beim Karpfen, fischerei under besonderer Berücksichtigung, der Anfertigungsmethoden und der Cyprinus carpio L. (Investigations Normicrung (Considerations on traps: of the different forms of scales of the carp, Cyprinus carpio L.) in fresh-water fisheries, with particular regard to terminology, methods of Detailed description of scale manufacture, & standardisation) arrangement on the Scaled Carp: scale numbor, size, morphology & development; Systematic account of the terminology a detailed description of 11 normal & structure of gears of this type. scale types & 3 abnormal. F FAO:glk F FAO: glk Frömming, H. (1957) 581506 581503 Rychlicki, Z. & St. Z.Fisch., 5:477 Giftige Schlammschnecken Zarnecki (1957) (Poisonous Z.Fisch., 5:423-42 Die Zatorer Karpfenaufzuchtmethode und mud-snails) deren Einfluss auf die Beseitigung der Contents as per titlo. Bauchwassersucht (The Zator-method of rearing carp and its effect on tho prevention of dropsy) Comparison of the results obtained with this new method with those obtained from the old; attempt to find a theoretical basis for the results from the new mothod; review of the advantages & disadvantages of the new method; & of

FAO:glk

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Rahn, J. (1957) 581507

Z.Fisch., 6:561-88

Die Fischerei auf dem Sacrower See in den Jahren 1949 bis 1955 (The fishery in the Sacrower See from 1949 to 1955)

Description of the lake from the point of view of fishery research; analysis of catches by gear & species; description of the various kinds of gear used & notes on each of the important species caught.

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temperatures.

Lollák, J. (1957)

Z.Fisch., 6:621-33

Auerbach, M. (1957)

Z.Fisch., 6:605-20

Hat die Schilddrüse für die Temperatur-

Investigation of the effect of thiourea

adaptation in various fish within normal

treatment on performance & resistance

Der Einfluss der Fresstätigkeit des Fischbestandes auf die Bodenfauna der

ing activity of fish stocks on tho

by feeding activity of the fish;

bottom fauna of fish ponds)

Fischteiche (The influence of feed-

Abundance & biomass of the bottom fauna in the studied pends; mortality imposed

upon temporary & permanent bottom fauna

ovaluation of the annual share of the bottom animal life in nutrition of the

tomperature range & at extreme

adaptation der Fische eine Bedeutung?

(Has the thyroid gland a significance

for temperature adaptation in fish?)

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581511

581510

Koltzor, I. (1957) Z.Fisch., 6:589-95 581508

Leibeshöhlenverhältnisse der Linksformen von Pleuronectes platessa L. und Pleuronectes flesus L. (Abdominal cavity proportions in the left-form of Pleuronectes platessa L. & Pleuronectes flesus L.)

Examination of the disposition of various organs in the abdominal cavity in the normal & reversed forms.

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fish stocks.

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Priwolnjow, T.I. (1957) 581509 Z.Fisch., 6:597-603

Dic Atmung in der Ontogenese der Fische bei verschiedenem partiellem Sauerstoffdruck (Respiration in the entogenesis of fish under different partial pressures of oxygen)

General review of results of examination of respiratory rates at various developmental stages & discussion of the significance of adaptability to different partial pressures with regard to speed of development & intensity of growth.

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Doufel, J. (1957)

581512

Z.Fisch., 6:635-8

Zur Okologie ciniger Pseudomonas-Arten
im Bodensec-Obersec (On the ecology
of some Pseudomonas-species in BodensecObersec)

Distribution of the species is described, & compared.

FAO:glk

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1(5):55

Wundsch, (1957) 581513

Z.Fisch., 6:639-40

Biologie dor mitteleuropäischen Süsswasserschnocken (Biology of the Central European freshwater sneil)

Review of the publication with the same title by Frömming, D., Verlag Duncker & Humblot, Berlin, 1956, 313 p.

Lisitzin, E. (1957) 581516

Merontutkimuslait.Julk., (176):102 p.

Vedenkorkeusarvoja 1953 ja 1954

(Water level records for the years 1953 & 1954). Su Sv In

The grouping of the observation material is given in the water level tables. From the tide gauge records, values have been taken for 6 hours daily, & besides, the monthly & annual means as well as the corresponding extreme values. The pole observations are expressed as mean values only.

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Harris, D.K. (1958) 581514 Biometrics, 14:195-206 On the probability of survival of bacteria in sea water

Observations analyzed have been drawn from a larger body of data obtained by the Public Health Service at the Shell-fish Sanitation Laboratory, Pensacola, Florida. Experiments concerned with survival of coliform & Salmonella schottmuelleri organisms added in controlled amounts to carboys containing natural sea water at various levels of temperature & salinity (see abstract 580347). FAO:sjh

Odum, N.P., E.J. Kuensler & 581517 M.X.Blunt (1957) Biol.Bull., Wood's Hole, 113:323 Uptake of P32 in benthic algae in relation to primary productivity

Abstr. of paper presented at the Marine Biological Laboratory, 1957. The rate of uptake of P³², net productivity, respiration & gross productivity of large intertidal benthic algae measured simultaneously in light & dark bottles suspended in a running sea water aquarium under controlled light & temperature.

FAO:tl

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Hill, D.R. (1958) 581515

<u>Biometrics</u>, 14:291-2

Some uses of statistical analysis in classifying races of the American shad (<u>Alesa sapidissima</u>)

Abstr. of paper presented to meetings of Biometric Society & AAAS, Indianapolis, 27-28/12/57.

Cushing, J.E. (1957) 581518
Biol.Bull., Wood's Hole, 113:327
Tissue transplantation in Pecten
irradians

Abstract of paper presented at the Marine Biological Laboratory, 1957. Study concerned with the response of invertebrates to transplant & the synthesis of antibodies.

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Jenner, C.E. (1957) 581519 Biol.Bull., Wood's Hole, 113:328 Schooling behaviour in mud snails in Barnstable Harbor leading to the formation of massive aggregations at tho completion of seasonal reproduction

Abstr. of paper presented at the Marine Biological Laboratory, 1957.

Aiello, E. (1957) 581522 Biol.Bull., Wood's Hole, 113:335 Enorgy metabolism and ciliary activity of Mytilus gill

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Study of the influence of several organic chemicals on the oxygen uptako & ciliary activity of Mytilus.

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Kinne, 0. (1957) 581520 Biol. Bull., Wood's Holo, 113:330 Adaptation to salinity and temperature in a curyhaline hydroid

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Study of the influence of salinity & temporature on the physiology & behaviour of Cordylophora caspia.

Moul, E.T. & D. Mason (1957) 581523 Biol. Bull., Wood's Hole, 113:351 Study of diatom populations on sand and mud flats in the Woods Hole area

Abstr. of paper presented at the Marino Biological Laboratory, 1957. Quantitative study of diatom population on & in the sand during June & August, using cell counts & chlorophyll extraction.

FAO:t1

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FAO: tl

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Thies, R.E. (1957) 581521 Biol. Bull., Wood's Hole, 113:333-4 Electrical recording in the living squid

Abstr. of paper presented at the Marine Biological Laboratory, 1957. The resting potential & spontaneous activity of the giant axon were measured in Loligo pealii.

Rockstoin, M. & M. 581524 Rubenstein (1957) Biol.Bull., Wood's Holo, 113:353-4 The biochemical basis for positive photokinesis of the starfish, Astorias forbesi

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Pigments were extracted from the dorsal skin & "eyespots" of dark-adapted animals through acid buffor & into alkaline 2% digitonin solutions & their absorption spectra determined before & after exposure to light of wave-lengths from 300 to 700 mpc. FAO:t1

FAO: tl

M

Wilber, C.G. (1957) 581525 Biol.Bull., Wood's Hole, 113:359 Some physiological characteristics of the fish heart

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Fish, varying in size from pipe-fish to striped bass, were studied electrographically to ascertain whether the average heart-rate varies, inversely with body size.

Wilson, T.H. (1957)

<u>Biol.Bull., Wood's Hole</u>, 113:362

In vitro studies on intestinal absorption of fish

Abstr. of paper presented at the Marine Biological Laboratory, 1957. The ability of fish intestine to transport sugars & amino acids across the wall against a concentration gradient was tested with an in vitro technique.

FAO:tl

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FAO:t1

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581528

Schulman, M.P. & G.A. 581526
Lamb (1957)
Biol.Bull., Woos's Hole, 113:261-2
Home synthesis in peripheral blood of marine fishes

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Study of the incorporation of Fe⁵⁹ into heme by varying degree of reticulation of the blood. Following fishes were used: toadfish (Opsanus tau), sea robin (Prionotus carolinus), scup (Stenotomus chrysops), king mackorel, (Scomberomorus regalis), bonito (Sarda sarda), smooth dogfish

Engle, R.L., Jr & K.R. Woods (1957)581529 Biol.Bull., Wood's Hole, 113:363 Phylogenesis of plasma proteins and plasma cells. II. Observations on the occurrence of plasma cells in marine invertebrates and fishes

Abstr. of paper presented at the Marine Biological Laboratory, 1957. Microscopic examinations were conducted to determine whether or not plasma cells are present in invertebrates & cold-blooded vertebrates.

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(Mustelus canis), spiny dogfish (Squalus acanthias), spotted skate (Raja diaphanos) and dusty shark (Carcharhinus obscurus).

Bovorton, R.J.H. & S.J. Holt (1957) 581530 Fish.Invest., Lond., Sor. II, 19:533 p. On the dynamics of exploited fish populations

A study for fisheries conservation & management, with application to North Sea demorsal fisheries, especially these for Pleuronectes platessa, Gadus auglefinus & G. callarias, Solea vulgaris & other spp. incl. salmenidae & freshwater forms. In 4 parts (Fundamentals of the theory of fishing, illustrated by analysis of a trawl fishery - Some extensions of the simple theory of fishing - Estimation of parameters - The use

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of theoretical models in a stuthe dynamics and exploitation populations). Ill., with bibli indexes for author, subject &	of fish ography,	Torada, K. (1957) Proc.UNISCO Symp.phys.Occanogr., Tokyo,:21-5 Measurement of displacement by a electromagnetic device and its application to occanographic measurements. Fr Description of some electrical vide measuring instruments.	n
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Böhnecke, G. (1957) Proc.UNESCO Symp.phys.Occanogra Tokyo:17-9 Remarks about the method of in ation into occanic circulation Review of methods used in variabranches of occanography.	nvestig-	Ono, K. (1957) Proc.UNLSCO Symp.phys.Occanogr., Tokyo,:26-7 The Ono's self-recording current Fr Notes on the principles & constrof the current meter.	motor.
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Deacon, G.E.R. (1957) Proc.UNESCO Symp.phys.Occanogr Tokyo,:20 Deep-current measurements. Notes on the use of neutrally floats for measuring deep current some results of the recent measuring that these floats.	Fr buoyant	Iwasa, K. (1957) Proc.UNESCO Symp.phys.Occanogr., Tokyo,:27-9 An instrument for measuring direction of the currection of the currection the temperature (the direct-read current meter, model CM-3). Notes on the principles & construction of the current meter.	ectly the ent and ling Fr
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Nakano, M. (1957) 581537 581540 Sasaki, T. (1957) Proc. UNESCO Symp. phys. Occanogr., 1955, Proc.UNESCO Symp.phys.Occanogr., 1955, Tokyo,:30-7 Tokyo,:46-8 Some oceanographical instruments Three instruments constructed and recently devised by the members of the employed in Japan. Central Meteorological Observatory and its subordinate organs. Notes on a temperature-depth recorder, an underwater camera & a G.K. Description of Nan'niti's current meter using a phototube; 'Ota's wave recorder; Ishiguro's & Watanabe's wave recorders, several types of wave analyzed & Agari's romote-reading thermometers. TL:tl M TL:tl M Kusunoki, K. (1957) 581538 Vino, A.C. (1957) 581541 Proc. UNISCO Symp. phys. Ocoanogr., 1955, Proc. UNISCO Symp. phys. Occanogr., 1955, Tokyo,: 38-42 Tokyo,:49-52 On the method of sampling of sea icc. Some trends in occanographic instrumentation. Description of icc-sampling instruments Notes on current trends in echo sounders, & notes on the chlorinity of sea ice at salinity determination, buoyant floats various dopths. to replace cables anchored buoys at sea current measurements with surface floats, model studies of the ocean circulation & research vessels. TL:tl M M TL:tl . 581539 581542 Miyako, Y., K. Saruhashi & Inouo, N., S. Nishizawa & (1957)(1957)K. Kameda M. Fukuda Proc. UNESCO Symp. phys. Oceanogr., Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo,:43-5 Tokyo,:53-8 The perfection of a turbidity meter Micro-analytical method and automatic and the photographic study of suspended potentiometric titration method for the chlorinity determination. matter and plankton in the sea using an undersea observation chamber. Description of the method and apparatus. Description of the undersea observation chamber and the transparency meter. M TL:tl M TLati

Josoph, J. (1957) 581543 Takenouti, Y., K. Hata & 581546 Proc. UNESCO Symp. phys. Occanogr., 1955, M. Torii (1957)Proc. UNESCO Symp. phys. Ocoanogr., 1955, Tokyo,:59-75 Tokyo,:96-100 Extinction measurements to indicate distribution and transport of water-On the forecast of surface water temperature for the frontal zone of masses. Fr westorn North Pacific. Description of instruments & methods, physical fundaments & units & results of Variation of temperature distribution measurements in North-European waters below the mixed layer, the energy exchange between the sea & atmosphere, (horizontal & vertical distribution of suspended matter & its relation to & the expansion of warm surface water currents & water masses). towards north. TL:tl M TL:tl M Hikosaka, S. & R. Watanabe (1957) 581547 Fukuoka, J. (1957) 581544 Proc.UNESCO Symp.phys.Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, the second second Tokyo,:76-86 Tokyo,:101-3 Areas of divergence and convergence of Variation of the occanic conditions in the north western Pacific. surface currents in the north-western Pacific. Short period changes of water temperature, changes of water Theoretical calculation of divergence & temperature in an interval of some months, convergence area in north-western long period changes of the oceanic Pacific. conditions & relation between wind & polar front in the ocean. TL:tl M TL:tl M 581548 Watanabo, N. (1957) Yoshida, K. (1957) 581545 Proc. UNESCO Symp. phys. Oceanogr., 1955, Proc. UNESCO Symp. phys. Oceanogr., 1955, Tokyo,:87-95 Tokyo,:104-6 Hydrographic conditions of the north-Coastal upwelling off the California western Pacific. I. On the temperature coast, and its effects on productivity change in the upper layer in summer. of the waters. FrDescription of the nature location & Heat balance study & attempt to predict amount of upwelling, & the factors the local change of temperature from influencing it. hoat balance & mixing.

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Nakano, M. (1957) 581549 Ichiye, T. (1957) 581552 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc.UNESCO Symp.phys.Occanogr., 1955, Tokyo,:107-11 Tokyo,:116-29 On a problem concerning the vertical On the variation of occanic circulation circulation of sca water produced by in the adjacent seas of Japan. winds with special reference to its bearing on submarine goology and sub-Description of short & long period marine topography. fluctuations in the boundaries & flow of Kuroshio; the wavy pattern of the Influence of wind currents on sediment surface temperature in the polar front transport & filling of harbours & bays. region, & the change of the current by travelling cyclones. TL:tl M TL:tl M Uda, M. (1957) 581550 Shoji, D. (1957) 581553 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc.UNISCO Symp.phys.Occanogr., 1955, Tokyo,:112-3 Tokyo,:130-6 Research on the fluctuation of the north On the variations of daily mean sea Pacific circulation (I). levels and the Kuroshio from 1954 to 1955. Fluctuation of the Oyasiwo Current in relation to the atmospheric circulation Dynamic topography & rolative current & the distribution of dichothermal velocities in the Kuroshie rogion, & waters. their relations to the sea levels along the coast. TL:tl M TL:tl Τ/Γ Deacon, G.E.R. (1957) 581551 Hidaka, K. (1957) 581554 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Oceanogr., 1955, Tokyo,:114-5 Tokyo, :137 The deep-water circulation in the On the Pacific circulation. Fr Pacific Ocean. Fr Abstract of the results of theoretical General notes on the circulation & studies of circulation, including updiscussion of the causes. welling into equatorial region.

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Takano, K. (1957) 581555 Fukai, R. (1957) 581558 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc.UNESCO Symp.phys.Oceanogr., 1955, Tokyo.:138 Tokyo,:149-52 Note on the convective circulation. On the deep circulation in the northwestern North Pacific with reference to vertical distribution of dissolved Contents as per title. oxygen. Contents as per title. TL: t7 M TL:tl M Hayami, S. (1957) 581556 do Buon, F. (1957) 581559 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNISCO Symp. phys. Occanogr., 1955, Tokyo,:139 Tokyo,:153-5 On the dynamics of Kuroshio off the Polagic fishes and oceanographic southern coast of Japan. conditions along the northern & central coast of Chile. FrNotes on the upwelling of cold water associated with a cyclonic whirl. Notes on the influence of hydrographical conditions, especially temperature on the migrations & local abundance of various polagic fish. TL:tl M TL:tl M 581560 Rochford, D.J. (1957) 581557 Miyako, Y. & K. Proc. UNESCO Symp. phys. Oceanogr., 1955, Saruhashi (1957) Proc.UNISCO Symp.phys.Occanogr., 1955, Tokyo,:140-8 The use of water mass composition in the Tokyo,:156-9 interpretation of eastern Australian On the vertical distribution of the dissolved oxygon in the occan. coastal occanographical data. Interpretation of trends in eastern The relation between dissolved oxygen & total carbon dioxide in the sea, & the Australian coastal hydrographic data vertical distribution of dissolved in terms of the circulation of the oxygon & the local population of principal Tasman Sca water masses, as an example of the possible general oceanoplankton. graphical significance of coastal studies. TL:tl M TL:tl M

Bruun, A.F. (1957) Proc.UNESCO Symp.phys.Occanogr. Tokyo,:160-8 The ecological zonation of the offr General notes on the ecological zonation of the deep-sea; district of some apodal fishes & a mesope cephalopod Spirula spirula.	lccp-sca.	Nanda, J.N. (1957) Proc.UNESCO Symp.phys.Occanogr., Tokyo,:179-81 Physical occanography in India. Contents as per title.	581564 1955, Fr
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Sugarawa, K. (1957) Proc.UNESCO Symp.phys.Occanogr. Tokyo,:169-74 The distribution of some minor lolements in western Pacific water Fr Notes on the methods used & hore & vertical distribution of iodinate strontium, arsenic & vanadium.	oio- ors.	Penyapol, C.A. (1957) Proc.UNESCO Symp.phys.Oceanogr., Tokyo,:182-3 Development of oceanographic wor. Thailand. Fr Contents as per title.	1955,
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Ishibashi, M. (1957) Proc.UNESCO Symp.phys.Occanogr. Tokyo,:175-8 Quantitative distribution of che cloments in the sea water. Relation between the atomic number the ionic potential & the amount clements in sea water.	emical Fr	Hidaka, K. & K. Yoshida (1957) Proc.UNESCO Symp.phys.Occanogr., Tokyo,:184-96 Physical occanography in Japan i period 1953-55. Fr Contents as per title.	1955,
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Miyadi, D. (1957) 581567 Serone, R. & N.-Van-Hai (1957) Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo;:197-203 Tokyo,:214-9 Some information of the basic studies on Recherches d'occanographie physique au marine biology in Japan. Vict-Nam (Physical oceanographic research in Viet-Nam). Notes on the programmes & the marine biological stations in Japan. Summarizes results of occanographic research off the east coast of Viet-Nam, & in the Gulfs of Tongkin & Thailand. TL:tl M M TL:glk Hiyama, Y. (1957) 581568 Ma, T.Y.H. (1957) 581571 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo,:220-4 Tokyo,:204-6 Biological occanography in Japan. Fr Roef corals used for proving the occurrence of shift in crustal masses & Review of the more academic research the equator and submarine features used to prove the sudden total displacement activities on marine biology in Japan, which have some relations with fisheries of the solid earth shell. biology in general. Contents as por title. TL:tl M M TL:tl Qureshi, M.R. (1957) 581569 Petelin, B.P. (1957) 581572 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Oceanogr., 1955, Tokyo,:207-13 Tokyo, 225-37. Occanography in Pakistan. Fr The relief of the floor and the bottom deposits in the north-west Pacific. Review of works planned, in progress & completed in the related fields of occanography. Description of the bottom profile of Kurile Kamchatka Tronch & the distribution of sediment types & their characteristics in the north-western Pacific. TL:tl M TL:tl M

Zenkevich, L.A. (1957) Moiscov, P.A. (1957) 581576 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo,:238-45 Tokyo,:253-9 The distribution of sea floor fauna in Influence of occanologic regimen of the the north-west Pacific. far-eastern seas on commercial fish population. FrQuantitative & taxonomic distribution of benthos in the north-western Pacific, Notes on the standing crops of benthos & general notes on the marine faunal & plankton, general distribution of regions. commercial fish spp., their fecundity & oceanographic conditions affecting the abundance & distribution. TL:tl MTL:tl M Sysoicv, N.N. (1957) - 581574 Bogorov, B.G. (1957) 581577 Proc. UNESCO Symp. phys. Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo,:260-76 Tokyo,:246-50 Regularities of plankton distribution Developments and future in the oceanographic instrument construction in the in north-west Pacific. Fr Horizontal distribution of plankton Notes on some conventional occanographic communities & the standing crop. instruments. Distribution of the standing crop with depth & preliminary list of zooplankton spp. collected in the north-western part of the Pacific Ocean. TL:tl TL:t1 M \mathbf{M} Zonkovich, L.A. (1957) Brujowicz, S.W. (1957) 581578 581575 Proc.UNESCO Symp.phys.Occanogr., 1955, Proc. UNESCO Symp. phys. Occanogr., 1955, Tokyo, :251-2 Tokyo,:277-92 Oceanographic research conducted by the On cortain chemical features of waters USSR in the north-west Pacific. and sodiments in north-west Pacific. Fr Notes on Russian institutions in the Far East, conducting occanographic Horizontal & depth distribution of research & a note on the voyages of R/V salinity, temperature, oxygen, pH, phosphates & silicates in a few typical VITIAZ. stations; chemical classification of water masses & notes on the chemistry of bottom sediments & their interstitial water. TL:tl M TL:tl M

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Jaasund, E. (1957) Bot.Notisor, 110:205-31 Marine algae from northern Norwa Taxonomic description of senile Continuation from earlier number this bulletin.	algao.	Pape, A. (1957) Fischwirt, 7:264-6 Die Binnenfischerei Schleswig-Hol (Inland fisheries of Schleswig-Hol Value of the inland fish producti the prices. Continuation from ear number.	olstein) Ion &
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Thomasson, K. (1957) Bot.Notiser, 110:251-64 Contributions to the knowledge of plankton in Scandinavian mountain 4 Description of 5 spp. of Stauras one de nono.	in lakes.	Gray, J. (1957) Sci.Amcr., 197(2):48-54 How fishes swim Illustrated discussion of implicate of recent work on swimming method speed of various fishes & marine mammals.	
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Mann, H. (1957) Fischwirt, 7:257-63 Chemische Untersuchungen im Hamber (Chemical investigation the harbour of Hamburg) Short review of the pollution provided in the pollution provided in the pollution.	ons in	Qureshi, M.R. (1957) Agric.Pakist., 8(2):98-137 A field-key to the identification fishes. 3. Clupciformes (Isospond Malacopterygii) Gives a systematic account of fam subfamilies & genera; systematic description of the spp. commonly & their distribution & common name	dyli, milies, found
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Kisclev, O.N. (1957) 581588 Movchan, V.A. (1957) 581585 Priroda, Moskva, 46(8):45-50 Priroda, Moskva, 46(8):98-9 Prudovoe rybovodstvo (Pond pisci-Podvodnoe tolevidenie (Sub-marine television) culture) Brief description of set. its use & Pisciculture is a high-yield branch of farming. Describes an efficient system results during recent experiments in the Barents Sea. Reference to newly of ponds, each meeting requirements of produced set, described in Priroda, various stages of fish breeding. Enumerates the scientific bodies which Moskva, (1), 1957. contribute towards efficient fishfarming. Describes spp. grown & yields obtained at examplary fish-farming concerns. M FAO:go F FAO:go Ogulchansky, A.Y. (1957) 581586 581589 Lamakin, V.V. (1957) Priroda, Moskva, 46(8):121-2 Priroda, Moskva, 46(8):102-4 Nakhodka skoleta iuzhnogo slona na Interesnaia broshiura o Baikale beregu Azovskogo moria (Skeleton of (Interesting pamphlet on the lake Baikal) Archidiskodon meridionalis Nesti, found on the Azov Sea shore) Roview of publication by M.M. Kozhov, "Baikal & its life", Irkutskoo knizhnoo Description of the find. Geography & izd., 44 p., 1956. geology of the area. M . FA0:go FA0:go \mathbf{F} Savoskin, I.P. (1957) 581587 Nosal, A.D. (1957) 581590 Priroda, Moskva, 46(8):104 Priroda, Moskva, 46(8):92-3 Morskoi luk (Soa Onion (Urginca Poliad v Dnopro (Coregonus poled in maritima L. Baker)) the river Dnieper) Description, use & areas of distribution Possibility of acclimatization indicated acclimatization white variety - medical by the good development of a specimen, plant. Red variety - raticide. caught in the Dnieper. The only possible origin of this specimen is a whitefishfarm in the region from which a number of yearlings escaped 9 months prior to the catch. FAO:go M FAO:go F

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Amorican Geological 581591 Institute (Publ.) (1957) Washington, D.C., 325 p. Glossary of geology and related sciences

Gives definitions, usago & variants of English terms & some in other languages for which there are no English equivalents. Incl. many terms relating to sedimentation.

Ramircz, M.V. (1957) 581594 Bol. Soc. vonezol. Cieno. nat., 18:157-62 Nuevas especies para la fauna ictiologica Venezelana (New species for the ichthyological fauna of Venezuela)

A list of spp. of the families Characidao & Nandidac.

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Nadaud, J. (1957) 581592 Encyclopédie Casterman, Bolgique, 92 p. Tous les poissons et la pêche (All fishes and fisheries)

A popular illustrated book containing information on marine & fresh water fishes & other aquatic organisms, their environment & fisheries.

Le Danois, E. (1957) 581595 George G. Harrap & Co. Ltd., London, 191 p.

Marine life of coastal waters (Western Durope)

Brilliantly ill. semi-popular account of the sea-coast, life in various zones & habitats, with major section on life on sandy & muddy shores, & special account of the Mediterranean coast of France.

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Weibezahn, F.H. & M.V. 581593 Ramiroz (1957)Bol. Soc. venezol. Cienc. nat., 18:153-6 Mortandad de peces de agua dulce causada por un crustaceo parasito, Artystone trysibia Schioedte, 1866 (Isopoda, Cymothoidae) (Mortality of fresh water fishes caused by a crustacean parasite Artystone trysibia Schioedte, 1866 (Isopoda, Cymothoidac))

A record of the parasite cause of mortality among the freshwater spp. (Aequidens tetramerus, A. pulcher & Mollienesia sphenops), with notes on its parasitic effect on the host & its relation to man. F FAOshr

Voight, W., Jr. (1958) Penn. Angler, 27(4):10-1 Sub-channels

581596

Describes the specifications for low flow channels, a type of improvement device for streams affected by bridge & highway & flood control measures.

GLK: wad

Lühmann, M. & H. Mann (1957)

Arch. FischWiss., 8(1-2):1-11

Über Organgewichte bei Karpfen
weights of organs in carp).

En

The changes of growth of internal organs & parts of the body of normally grown carps were investigated, as well as the modifying influence of the surroundings on fast growing, slowgrowing & badly grown fishes.

581599 (Card 2)

(Squalius cephalus L.), & Chondrostoma nasus L., have been described, the values for the rays of all fins are given.

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Amlacher, E. (1957) 581598
Arch.FischWiss., 8(1-2):12-31
Der Blutzucker normaler und an infektiöser Bauchwassersucht erkrankter
Karpfon (K2) (The blood sugar of normal carps (K2) & carps sick with infections dropsy). En

The total reduction of carp-blood (Oxalat blood) was ascertained in healthy & artificially infested, as well as partly in naturally ill K2, by means of the methods according to Hagedorn-Jensen, Neuwoiler, & Crecelius-Scifert. The influence of different environmental conditions on the sugar content was also investigated.

GLK:tl

Miaskowski, M. (1957) 581599
Arch.FischWiss., 8(1-2):32-53
Variabilitätsstudion an don Flosson der
Cypriniden (Studies on the
variability of the fins of Cyprinids).
En

After the characteristics of the types of fin-rays of abundant sp. of Cyprinids i.e. crucian carps (Carassius carassius L.), carp bream (Abramis brama L.), white bream (Blicca björkna L.), reach (Leuciscus rutilus L.), rudd (Scardinius crythropthalmus L.), dace (Leuciscus leuciscus L.), bleak (Alburnus lucidus Hock.), barbel (Barbus barbus L.), chub

Schweiger, G. (1957) 581601

Arch.FischWiss., 8(1-2):54-78

Die toxikologische Dinwirkung von

Schwermetallsalzen auf Fische und Fischnährtiere (Toxiological influence of the salts of heavy metals on fish and fish food animals). En

Experiments testing the effect of the heavy metal salts moreury, cadmium, nickel, cobalt & mangan upon fishes (tench, carps, rainbow-trouts, brook-trouts) & fish food animals (Carinogam-marus rocselii, Tubifex tubifex, Chironomus thummi-larvae, Anabolia nervosalarvae).

GLK:tl F

Thurow, F. (1957) 581602

Arch.FischWiss., 8(1-2):79-93

Uber den Trockensubstanz- und Fettgehalt von Aalen aus der Kieler Bucht und der Kieler Förde (On the content of dry substance & fat of cels from Bight of Kiel & Kiel Fjord). En

Distribution of fat in the body, seasonal variations in dry substance & fat content,& their relations to growth.

GLK:t1

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Halsband, E. (1957) 581603 Arch.FischWiss., 8(1-2):140-50 Der Einfluss der Stoffwechselintensität auf die Reizempfindlichkeit der Fische gogon elektrischen Strom influence of the intensity of motabolism on the sensitivity of fish to electric current).

The relation between the intensity of metabolism of a fish & its reaction in the electrical field was determined.

GLK:tl

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Moyor-Waardon, P.F. & A.

(1957)von Brandt Schr. der Bundesforschungsanstalt für

581606

Fischorei, Hamburg, 341 p. Die Fischwirtschaft in der Bundesrepublik Deutschland (Tho fishing industry of the Federal Republic of Germany)

After discussing the basic conditions, problems, & development of fisheries in West Germany & of fisheries as economic factor, describes the vessels, gear, ports & markets, foreign trade, marketing & processing, administration, institutions & services. MF SJH: Alk

581604 Nikolski, G.W. (1957) Dtsch. Verl.d. Wissenschaften, Berlin,

632 p.

Spezielle Fischkunde (Special ichthyology)

581607 Bahr, Kl. (1957) Arch. Fisch Wiss., 8(1-2):178 Die Fischwirtschaft in der Bundesrepublik Deutschland (The fishing industry of the Federal Republic of Germany)

Review of 581606.

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Krefft, (1957) 581605 Arch. FischWiss., 8(1-2):176-7 Spozielle Fischkunde (Special ichthyology)

Roview of 581604.

581608 Lühmann, (1957) Arch.FischWiss., 8(1-2):177-8 Biologie der mitteleuropäischen Süss-(Biology of the wasserschnecken central Muropean freshwater snail)

Review of publication with the same title by Frömming, E., Vorlag Duckor & Humblot, Borlin, 313 p., 1956.

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581609 581612 Lühmann, (1957) Anonymous (1957) Arch. Fisch Wiss., 8(1-2):180 Dansk FiskTid., 75:29-33 Düngung in der Teichwirtschaft Totaludbyttot af det danske fiskeri i (Fertilization in fish culture) (Total yield of Danish fishery in 1956) Review of publication with the same title, by Wunder, W., Tellus-Verlag, Review of fisheries statistics. Essen, 75 p., 1956. GLK: \mathbb{F} FAO:tl M 581613 Fischer, 0. (1957) 581610 Welle-Strand, E. (1957) Verlag von Dietrich Reimer, Berlin, Dansk FiskTid., 75:55 Norge udbygger en havgående fiskeflåde 314 p. til fjernfiskeri (Norway projects a Landgewinnung und Landerhaltung in sca-going fishery fleet for distant Schleswig-Holstein. 7. Hydrographic des Küstengebietes (Bonification and fishery) maintenance of the land in Schleswig-Holstein. 7. Hydrography of the coastal Notes on the plans of building a offshore fisheries fleet with factory arca) ships. M M FAO:tl Anonymous (1957) 581614 Moyer-Waardon, P.F. (1957) 5816111 Dansk FiskTid., 75:97-100 Arch. Fisch Wiss., 8(1-2):180 De fiskeribiologiske undersøgelser 1956 Landgewinnung und Landerhaltung in Schleswig-Holstein. 7. Hydrographie des Küstengebietes (Bonification and i de indre danske farvande (Fisheries biological investigations during 1956 Küstengebietes in the Danish coastal waters) maintenance of the land in Schleswig-Holstein. 7. Hydrography of the coastal Review of the investigations on plankton area) benthos, flatfish fry, plaice, gadids, col, salmon & pollution of coastal Review of 581610. waters. GLK: FAO:tl MF M

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A.F. (1957) Dansk FiskTid., 75:129 Plan om dansk fjornfiskeri med storkuttore (Plan on Danish fishery with 4 new big cutters) Notes on the earlier experience future plans for expansion of I fishery with big vessels to Bar Sea & Greenland waters.	distant s & Danish	Anonymous (1957) Dansk FiskTid., 75:155-6 Undersøgelser i de forske vande (Investigations in the fresh wate Review of the Danish investigatio inland fisheries & pollution duri 1956.	ns in
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Anonymous (1957) Dansk FiskTid., 75:145-6 Fiskeriundersøgelserne ved Faer og i nordligere havområder investigations by Faercers and northern sea areas) Review of the principal results Danish investigations in North & notes on long-period changes waters.	Fisherics in the of Atlantic	Anonymous (1957) Dansk FiskTid., 75:177 Blødongrund-sildenes vandringer u under norsk ledelse (The migr of the herrings of Bløden Bank ar investigated under Norwegian lead ships) Notes on the plans for internation herring investigations in the Nor	ations c cr-
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Hansen, P. (1957) Dansk FiskTid., 75:153-5 Store udvandringer af torsk fra farvandene ved Grønland (Gr emigration of cod from the Gree waters) Notes on the distribution of co around Greenland & strength of year-classes of cod.	cat nland d larvac	Niclson, B.R. (1957) Dansk FiskTid., 75:237-8 Fiskoriforholdone i Chile (Ficonditions in Chile) Short review of the present conditions future plans for expansion.	581620 shorios tions
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Birne, K.E. (1957) 5816 Dansk FiskTid., 75:367-70 Om forureningen af vore vandområder (On pollution of our water areas) Review of the pollution of waters inc coastal areas of the sea & the influe of pollution of fish.	Dansk FiskTid., 75:498 Nyt havbiologisk institut fra nytår (New marine biological institute in the new year)
FAO:tl MF	FAO:tl M
Birnø, K.E. (1957) 5816 Dansk FiskTid., 75:379-81 Forurenede fiskevande og opklaring af foreliggende forureningsårsager (Polluted fish-waters & determination of the causes of pollution) Notes on the possible sources of pollution & ways of locating the sour	Dansk FiskTid., 75:565-8 Do internationale sildemacrkninger i Nordsøen (The international tagging of herring in the North Sea) Review of the programme & notes on proliminary results of recapture.
FAO:tl F	FAO:tl M
Jensen, A.J.C. (1957) 5816 Dansk FiskTid., 75:443 Vandtomporaturerne har i år begunstig gulåls forvandling til blankål (T water temporatures have promoted the metamorphosis of yellow col to silver cels in this year) Notes on the influence of the temporature of the metamorphosis of o before spawning migration.	Fish.Stud., F.A.O., (7):78 p. Electrical fishing A review, with illustrations & tables of experimental results, & doaling with basic principles, applications, protective measures against misuse of electrical fishing goar, prediction of
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581627 Tsceb, Ya. Ya., (1958) Zool.Zh., 37:3-12-

Sostav i rolichestvonnoe razvitie fauny mikrobentosa nizoviov Dnepra i vodocmov Kryma (Composition & quantitative dovolopment of microbenthal fauna in the down stream of the Dnioper & in the bodies of water of the Crimea).

Results of quantitative study of benthos in the river Dnieper & water reservoirs of Crimea & Kakhovka.

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581628 Sveshnikov, V.A. (1958) Zool.Zh., 37:20-6 Novye dlia Bologo moria vidy polikhet (Polychaots species new to the White Sca). i n

9 now spp. for White Sea are described: Mystides southerni Banse (Phyllodocidae) Ptorosyllis formosa Claparode, Eusyllis lamolligora Marion et Bobretzky, Autolytus prismaticus (0. Fabricius), A. prolifer (0.F. Müller) (Syllidae), Polydora ciliata ciliata (Johnston) (Spionidae), Dodecaceria concharum Oersted (Cirratulidae), Heteromastus filiformis (Claparède) (Capitellidao), & Nicomache minor Arwidsson (Maldanidao). FAO: tl

581629 Nikolskii, G.V. (1958) Zocl.Zh., 37:41-56

O vliianii vylova na strukturu populiatsii promyslovoi ryby (Effect of the catch on the population structure of commorcial fishes).

Discussion of effect of catch on the sizo & age composition of fish stocks with short & long life cycles. Version of paper of same title submitted to Joint Scientific Mooting of ICNAF/ICES/ FAO, Lisbon, 1957.

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Ovchinnikova, T.I. (1958)

Zool.Zh., 37:131-4 O zarazhonnosti molliuska Bithynia loachi Schopp. i karpovykh ryb lichinochnymi stadiiami Opisthorchis felincus (Rivolta, 1884) v ochago opistorkhoza v (On the infection of Sumskai oblasti the mollusc Bithynia leachi Schepp. and cyprinidae-fishes with the larval stages of Opisthorchis folineus (Rivolta, 1884) in the nidus of Opisthorchosis in Sumyregion). En

Study of molluscs & fishes of Cyprinidao family carried out in the nidus of opisthorchosis in the Pissarev district, Sumy-region (on the Vorskla R.) has

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shown the presence of larval forms of Opisthorchis folineus (Rivolta, 1884) in these intermediate hosts.

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Bauor, O.N. & V.M. Ivasik (1958) 581632 Zocl.Zh., 37:144-6 Populiarnyi kurs ikhtiopatologii (Popular course on ichthyopathology)

Review of 27 lectures delivered in 1952 by 17 Czech experts (Kurs Ludowych Rybarskych Pathologu. Rcd. Hanzal J., Praha, 1956), on diseases, parasites & enemies of fish, causes & remodies, breeding, hypophisis injections, fishmarking, pond maintonance, food, interbrooding, selection.

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581633 Lange, A.B. (1958) Orloff, G. (1958) 581636 Curr.Bibliogr.Fish.Sci., 1(5):Suppl.4-5 Zool.Zh., 37:151-6 Vtoroe soveshchanie embriologov SSSR Second meeting of the International (Second conference of USSR Commission for Fishery Rosearch in the embryologists) Western Pacific 150 papers on the "relation between Abridged translation of 581635. organisms & their environments at various stages of development". The majority doals with experimental embryology. Many loctures regard connections between biological research & animals' breeding, commercial use & acclimatization. FAO:go FAO: M Orloff, G. (1958) 581634 Lindberg, G.U. (1958) 581637 Curr.Bibliogr.Fish.Sci., 1(5):Suppl.1-4 Zool.Zh., 37:146-7 Second conference of embryologists of Morfologia i sistematika ryb (Fish the USSR morphology and hierarchy) Abridged translation of 581633. Review of original publication with the same title by Matsubaru, K., Ishizaki-Shoten, Tokyo, 1955, 1605 p. FAO: MF FAO: 581638 Nikolskii, G.V. (1958) **5**81635 Raikova, N.V. (1958) Zool.Zh., 37:345-58 Zool. Zh., 37:158-60 Zhiznennyi tsikl Polypodium hydriforme Vtoroi plenum mezhdunarodnoi komissii po Ussov (Coelenterata) (The life cycle rybokhoziaistvennym issledovaniam v of Polypodium hydriforme Ussov (Coolenzapadnoi chasti Tikhogo okcana terata). (Second meeting of the International Commission for Fishery Research in the Wostern Pacific) Parasite of sturgeon eggs feeding yolk. Study of its development with the scope of finding remedies. Prophylactic China, N. Korca, N. Vietnam & USSR romeasures recommended. presented in the Commission, created for promoting occanologic & limnologic research, increasing commercial aquatic animals roserves. Over 30 lectures were delivered.

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Kirianova, E.S. (1958) 581639 Zool.Zh., 37:359-72

Stroonic kopuliativnogo apparata samtsov presnovodnykh volosatikov (Nematomorpha, Gordioidea) (On the structure of the copulative organs of males of the froshwater hairworms (Nematomorpha, Gordioidea)). In

Description of the organs of 5 spp. First contribution to more ample studies.

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the mainland.

Alcov, Iu.G. (1958)

O dvizhonii Zeus fabor L.

prosent shape & position.

Zool.Zh., 37:463-5

of Zous fabor L.).

Novikov, N.P. (1958)

Prosnovodnaja ikhtiofauna nokotorykh

(Freshwater ichthyofauna of certain

pribrezhnykh ostrovov Iaponskogo moria

islands lying off the coast of Japan).

6 of the spp. of fish found on 2 of the

islands do not endure salt water. They

could not have been introduced by man.

Proof that these islands formed part of

The study of swimming motions & behaviour

of Zeiformes, closely related to Pleuro-

nectiformes, seems to show the reasons

for which the latter acquired their

Zool.Zh., 37:461-3

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(Motions

581643

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Mikailov, T.K. (1958) Zool.Zh., 37:373-8 581640

Parazitofauna kofali Kaspiiskogo moria (Parasitofauna of Mugil saliens Risso of the Caspian Sea). In

Doscription of 8 spp. of parasites found on Black Sea mullets acclimatized in the Caspian. 3 of these were unknown in the Caspian & 4 never found on mullets in their natural habitat.

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Poliakov, G.D. (1958) 581641 Zool.Zh., 37:403-14

O prisposobitelnom znachenii izmenchivosti vesa segoletkov karpa (Weight
variability of carp fingerlings as a
sign of adaptability). En

Variability of cortain individual characteristics of fish is a sign of adaptability of the entire stock to altoring living conditions, & not the result of incidental natural selectivity of specimens.

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Mordukhai-Boltovskoi, F.D. (1958) 581644 Zool.Zh., 37:470-4

Fauna bezpozvonochnykh nizoviov rek Ukrainy, usloviia ee sushchestvovaniia i puti ispolzovaniia (Invertebrates of the lower course of Ukrainian rivers, conditions in which they live & the ways in which they can be utilized)

Review of publications with the same title by Markovskii, Iu.M., Akademiia nauk Ukrainskai SSR, *Inst. gidrobiologii Pt. 1, 1953, Pt. 2, 1954, Pt. 3, 1955, 700 p.

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Boldyr, E.D. & G.K. 581645
Petrushevskii (1958)
Zool.Zh., 37:474-5
Review of articles by 11 Chinese & 1
Russian scientist, Acta hydrobiol.sin.,
1956. (2):129-335

Dealing with anatomy, parasitology, fish-farming, plankton, etc. The articles are supplemented by detailed summaries & many illustrations.

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Timm, R.W. (1957)

Bengal, E. Pakistan.

Island

Pakist.J.sci.Ros., 9(4):133-7

New marine nematodes from St. Martin's

Paracanthonchus tumopapilatus n. sp., Camacolaimus bulbosus n. sp., Pscudalel-

n. sp. described & ill., from Bay of

loides bengalensis n.g., n.sp., Steinerla

pilosa (Cobb 1914) var. brovistosa n.var. Thoristus (Mosotheristus) sancti-martoni

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Khaberman, Kh.M. (1958) 581646
Zool.Zh., 37:476-80

O zoologicheskikh issledovaniiakh v
Estonskoi SSR (Zoological research in the Estonian SSR)

Activity of scientific bodios & zoologists in Estonia. Authors & titles of publications dealing with hydrobiology & ichthyology.

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Haque, S.M.A. (1957) 581647

Pakist.J.sci.Ros., 9(4):123-5

A mathematical model of flood waves from tropical cyclones

It is assumed that water is deposited on the sea-surface simmetrically about a centre, & the speeds of propagation of dynamic & kinematic waves on this mass of water are determined for large & small distances from the centre under certain restrictive assumptions.

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Stophons, R.C., R.L. Fisher & 581649
R.G. Miller (1957)
Trans.N.Amer.Wildl.Comf., 22445-57
Food preferences of California surf
fishes with a review of available baits

Stomach contents analysis with special reference to preferences displayed by the investigated species for the bait species on sale, with notes on the availability of the bait species.

Suarez Caabro, J.A. (1957) 581650

Noverim, 2(6):14 p.

Investigaciones sobre el plancton marino
de Cuba (Research on marine plankton
of Cuba). En Fr

Expounds the importance & objectives of

of Cuba. An outline of planktonology in

the investigations of the marine plankton

Latin America is included.

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Stock, J.H. (1957) Bull.Sea Fish.Res.Sta., Haifa, (Contributions to the knowledge o Red Sea. 2. Pycnogonida from tho of Aqaba Taxonomic notes on Rhopalorhynch pedunculatum & Ammothella append (Dohrn).	f the Gulf	Ost.Fisch., 11:66-7 Früchte des Meeres (Fruits of sea) Review of 581653.	581654 the
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Ponnamperuma, F.N. (1958) 581 News Lett.I.R.C., 7(1):10-3 Lime as a remedy for a physiological disease of rice associated with execution	and additional and the second	Hoather, R.C. (1957) 581660 J.appl.Bacteriol., 20:180-7 Effect of thiosulphate and of phosphate on bactericidal action of copper and zinc in samples of water
F	egilminya apinala i kati milaki ini — dinggan milaki apina — di	F
Anonymous (1958) 581 News Lett., I.R.C., 7(1):14-5 Time and methods of application of u	658 urca	Naturwissenschaften, 44:622-3
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Smith, H.H. (1958). 581 Bot.Rov., 24:1-24 Radiation in the production of usefumutations A review with a bibliography of 90 references.	1659 il	Anonymous (1957) 581662 Analyst, 82:683-708 Recommended methods for the analysis of trade effluents. Determination of exygen demand
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Barker, F.B. & L.L. 581669 Thatcher (1957) Analyt, Chem., 29:1573-5 Modified determination of radium in water	Declalkar, S.T. & Kamala 581672 Schonie (1957) Indian J.med.Res., 45:571-86 Thiaminase from fish. I. Proporties of thiaminase
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Thatcher, L.L. & F.B. 581670 Barker (1957) Analyt.Chem., 29:1575-8 Determination of uranium in natural waters	Declalkar, S.T. & Kamala 581673 Schonie (1957) Indian J.mod.Res., 45:587-92 Thiaminase from fish. II. The effect of certain compds. on thiaminase activity
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Lacy, W.J. & D.C. Lindston (1957) 581671 Ind. Eng. Chom., 49:1725-6 Removal of radioactive contaminants from water by ion-exchange slurry	Nigrolli, F.Ross (1958) 58167. Trans.N.Y.Acad.Sci., 20:248-62 Dutchman's baccy juice or growth- promoting and growth-inhibiting substances of marine origin

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581678 581675 Battaglia, B. (1957) Cordier, D., R. Barnoud & Annoe biol., 33:259-68 A.M. Brandon (1957)Ecological differentiation and incipient C.R. Soc. Biol., Paris, 151:739-42 intraspocific isolation in marino Influence of passage from sea water to copopods fresh water or supersaline sea water on the respiratory exchanges of Gobius auratus and G. lota When gobies were transferred from sea water to fresh water the O consumption decreased about 50% after 4 hours, with no significant change in body weight. When transferred from normal sea water (36 g. salts/1.) to supersalted sea water (80 g. salts/1.) for 4 hours there was no change in O consumption & no M deaths, but an av. 13% loss in body wt. 581676 581679 Richtor, G. (1957) Toyomizu, M. (1957) Naturwissenschaften, 44:520-1 Nippon Suisan Gakkaishi, 22:368-73 Ribonucleic acid synthesis in germ-free Antibiotic action of fish components. portions of green algae IX. Relation between the antibiotic action of the autoxidized shark liver The ribonucleic acid (RNA) synthesis of oil and thiobarbituric acid value Acetabularia moditerranea was investigated. Only the rhizoid contg. nuclei produced RNA when illuminated 12 hours daily over a 28-day period. :tl F M 581680 Follman, G. (1958) Migita, M. & J.J. 581677 Planta, 50:671-700 Matsumoto (1957) The uptake and binding of water and Nippon Suisan Gakkaishi, 22:561-8 The extractability of the muscle nonelectrolytes by the cells of diatoms proteins of marine animals 5 centric & 5 ponnate diatoms were studied for their uptake & binding of water, sucrose, orythritol, malonamido,

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glycerol, urea, methylurca, ethylene glycol, acetamide & propionamide.

Lazarow, A., & al. (1957) 581681

Biol.Bull., Woods Hole, 113:414-25

The isolated islet tissue of fish. II.

The effect of electrolytes and other factors on the oxygen uptake of pancreatic islet slices of toadfish, using the cartesian diver micro-respirementer

Respiration of pancreatic islet tissue slices of toadfish (Opsanus tau) was studied under varying conditions of pH, tonicity, electrolyte compn., trace metals, & serum protein.

Jančařik, A. (1957) 581684 Ann. Acad. tchćcosl. Agric., 2:657-70 Physiology of the digestion in the carp. II. Digestion of starch by the endogenous enzymes of the carp

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Lindahl, E. & O. Svard (1957) 581682

Acta chem.scand., 11:846-53

Guanino motabolism in fish. I.

Occurrence of a guanino-doaminating enzyme in fish skin

Properties of a guanine-deaminating enzyme of <u>Leuciscus rutilus</u> skin were studied.

Jančařik, A. (1957) 581685 Ann.Acad.tchécosl.Agric., 2:763-74 Physiology of the digostion in the carp. III. Digostion of starch by enzymos from the animal food of the carp

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Waldschmidt-Leitz, E. & 581683
H. Gudernatsch (1958)
Hoppe-Seyl.Z., 309:266-75
The structure of protamines. V.
Relations between composition and degree of maturity of clupein

The influence of maturity on the chemical composition of clupcin (I) from Norwegian winter herring Clupca harengus has been studied.

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Iverson, E.S. & H.O. Yoshida (1957) 581686 Spec.sci.Rep.U.S.Fish Wildl.Scrv., (203): 38 p.

Longline and troll fishing for tuna in the central equatorial Pacific, January 1955 to February 1956

This report reviews the general results of 9 combination longlining & trolling cruises to the Line Islands between Jan., 1955 & Feb., 1956. Discusses the effect of depth of gear on catch rates, analyses catch composition from each method & discusses the evidence of yellowfin abundance from this work.

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581690 Gurvich, V.F. (1958) 581687 Votintsev, K.K. (1958) Zool.Zh., 37:294-7 Novyi vid roda Cyclops O.F. Müll. Zool.Zh., 37:287-90 O roli temperaturnogo faktora v formirovanii planktonnykh kompleksov ozera (Crustacea Copepoda) is ozera Kara-Kul (The function of temperature (New species of the genus Cyclops O.F. Müll. (Crustacea Copepoda) in the development of the plankton complex of the lake Baikal). found in lake Kara-Kul (Pamir)). Arguments against data collected A Cyclops pamirensis, inhabiting lake Kara-Kul, related to, but slightly conclusions drawn on the decisive function of temperature in the developdiffering from species found in Tibetian ment & composition of plankton. lakes. \mathbf{F} FAO: go FA0:go F 581688 Koreneva, T.A. (1958) Hasimovich, A.A. (1958) 581691 Zool.Zh., 37:290-1 Zool.Zh., 37:312-3 Kolovratka, parazitiruinshchaia v O terminakh po zoologii pozvonochnykh v kladkakh Tendipedid (Rotifers. anglo-russkom selskokhoziaistvennom parasites of Tendipedidae roe). In (Regarding zoological terms, used for vertebrates, in the English-Both adult rotifers & their eggs where Russian Agriculture Dictionary) found inside Tendipedidae egg clutches. Rotifers attack spawn deposited along Criticism & indication of errors found the shore. in the dictionary by B.N. Usovsky, N.V. Gominova, T.A. Krasnselskaia, J.P. Kopeshinskaia, Gos. Tzd. Tekniko-Teoriticheskoi Literatury, Moscow, 1956. FAO: go \mathbf{F} FAO:go 581692 581689 Kuderskii, L.A. (1958) Savilov, A.I. (1958)

Zool.Zh., 37:291-4 Prisposoblenie Astsidii roda Chelyosoma k zhizni na ilistykh gruntakh (Adaptation of Ascidians of the genus Chelyosoma to the dwelling on silty ground). En

Ascidians of the Okhotsk sea, found on silty ground adhere to the sea bed by a rhizoform, outgrowth, instead of the footlike excrescence by which they adhere to solid objects in their usual habitat. A new biotope thus develops enabling it to expand seaward.

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Zool.Zh., 37:495-503 K voprosu o mnogoletnikh izmeneniiakh biologicheskikh svoistv bespozvonochnykh Bologo moria (Long-term alterations of biologic properties of White Sea invertebrates).

Arguments against data & his conclusions, stated by V.V. Kuznetsov in Zool.Zh., 36(4) on degeneration of certain molluscs.

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Svetovidov, A.N. (1958) 581693 581696 Lemche, H. (1957) Nature, Lond., 179:413-6 Zool.Zh., 37:584-93 Vidovoi sostav semeistva Blenniidae A new living deep-sea mollusc of the Cambro-Devonian class Monoplacophora Chernogo moria (Blenniidae of the Black Sea). Description of the new species Neopilina galatheae from the west coast of Mexico. Existence of spp. of this family confined exclusively to the Black Sea is doubtful. More careful study of the 2 presumed exceptions may lead to their identification with known Mediterranean spp. GLK:hr M M FAOsgo Lotichevskii, M.A. (1958) Anonymous (1958) 581694 581697 Zool.Zh., 37:511-7 Zool.Zh., 37:594-600 Novyi nyne zhivushchii glubokovodnyi O sviazi izmenenii sozrovaniia polovykh molliusk iz Kembriisko-Devonskogo klassa produktov i zhirnosti u belorybitsy (A new living deep-(Relation between fat contents in the Monoplacophora sea mollusc of the Cambro-Devonian class flesh & sexual ripening of Stenodus of Monoplacophora). loucichthys). En Russian translation of 581693. Experiments carried out with reproducers kopt in river-bed enclosures show that fat is consumed chiefly by movement & that fatness does not interfere with sexual ripening of fishes. FAO: M \mathbf{F} FA0:go 581698 Beklemishev, V.N. (1958) 581695 Iablokov, A.V. (1958) Zool.Zh., 37:601-11 Zool.Zh., 37:518-22 K morfologii pishchevaritelnogo trakta K voprosu o rannei evolutsii molluskov. Sravnitelno-anatomicheskoe znachenie i zubatykh kitoobraznykh (Morphology funktsionalno-morfologicheskae tolkoof the digestive system of Odontoceti). vanie organizatsii Neopilina galatheae In (Early evolution of molluscs. Description of the entire alimentary Organic structure of Neopilina galatheae Lemche from the standpoint of comparative system, structure & functions of teeth, tongue, throat, stomach of fish-eating anatomy & functional morphology). whales, mainly the white whale. Importance of the discovery for the study of mollusc evolution. Disagreement with some of Lemche's conclusions.

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Akhmerov, A.Kh. & I.P. Martianova (1958) Zool.Zh., 37:619-21 K metodike opredeloniia slizis sporovikov roda Chloromyxum, Martin 1890 (Methods for identify Myxosporidia of the genus Chlomingazzini, 1890). En Brief description of methods a possible improvements by way of a colouring spores of Chloromy	Tingazzini, ring promyxum ased & of fixing	Pirozhnikov, P.L. (1958) Zool.Zh., 37:625-9 Ob arcale i ekologii kopoperalanoides Juday (Goog & ccology of Senecella callin Description & relation to Value of this copeped & active transplantation.	graphical range lancides Juday) other spp.
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Palii, M.A. (1958) Zool.Zh., 37:622 Parazit shchuki Philometra (Frobturans Prenant (Philometrical (Filaria) obturans Prenant, a attacking pikes). En Behaviour, effect & geographical distribution of the parasite.	tra parasite	Hedley, R.H. (1958) Nature, Lond., 181:1440-1 Mr. Arthur Earland Obituary of this marine z specialist on foraminifer	
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Bogoslovskii, A.S. (1958) Zool.Zh., 37:622-5 Dva novykh vida kolovratok - I nophorus verae, sp. n. i Lecar chankensis, sp. n. (Two no of rotifers - Paradicanophorus sp. n. & Lacane chankensis, sp. En Description of both spp., one the White Sea, the other in la Khanka. Relation to known spp.	ow species verae, n.).	Kawai, K. (1958) Nature, Lond., 181:1468 Cytochrome system in oyst Describes experiments wit gigas.	
FAO:go	MF	GLK:wad	M

581708 581705 Grundy, F. (1958) Ishihara, Y. & al. (1958) Mom. E. Afr. met. Dop., 2(11):11 p. Nature, Lond., 181:1468-9 Structure of sperm and sei-whale The use of cetyl alcohol in solution to insulins and their breakdown by whale reduce evaporation from reservoirs -Report on an experiment on Malya pepsin reservoir in Tanganyika territory, in August, 1957 Contents as per title. Contents as per title. F GLK: wad М Melnick, S.C. (1958) 581706 Young, F.N. (1958) 581709 Amor. Scient., 46:154A-6A Nature, Lond., 181:1483 Zoogeography: the geographical Occurrence of collagen in the phylum mollusca distribution of animals Describos methods & results of Roview of 570385. experiments to determine the presence of a collagen-type protein as indicated by the occurrence of hydroxyproline in Holix, Mytilus & Loligo. MF GLK: wad M TITLE Howie, D.I.D. (1958) 581707 Australia. Commonwealth Bureau 581710 Nature, Lond., 181:1486-7 of Census & Statistics (1957) Dried organic substances as food for Canberra, (Bull. no. 50), 77 p. larval annelids Primary industries. II Non-rural industries and value of production Describes methods & results of experiments to determine suitable foods Contains tables of fisheries (fish, crustacea, molluscs) & whaling statistics using liver, egg & nettle powder as well as several marine unicells. quantities & values by spp., imports & exports, boats & equipment in use, persons employed in these industries. GLK: wad М. FAO:sjh MF .

581711 Gooding, R.U. (1957) J.Mar.biol.Ass.U.K., 36:195-221 On some copepoda from Plymouth, mainly associated with invertebrates, including three new species

New genera & spp. Micropontius. Lichomolgus & Conchyliurus; also new Plymouth rocords. Notes on morphology, systematics & distribution bionomics.

Steele, J.H. (1957) 581714 J.Mar.biol.Ass.U.K., 36:233-41 A comparison of plant production estimates using 14C and phosphate data

Comparison of the study of the change of phosphate content of a water column & the C14 measurements for determination of basic organic production. Production. data for Fladen Ground in 1955 & 1956 are given & filtering rates of zooplankton & sinking rates of phytoplankton are calculated.

GLK:sjh

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GLK:t1

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Burt, W.V. (1957) 581712 J.Mar.biol.Ass.U.K., 36:223-6 On the attenuation of light in the sea

Notes on the theoretical Mie scattering & discussion on the extinction coefficient in various mud suspensions, & in natural river waters in respect of the determination of the approximate grain size of the suspended matter.

581715 Llewollyn, J. (1957) J.Mar.biol.Ass.U.K., 36:243-59 The larvae of some monogenetic trematode parasites of Plymouth fishes

11 new Oncomiracidia (new term for monogenetic larvae) described & classified. Techniques for rearing described.

GLK:tl

MF

GLK:sjh

MF

Steele, J.H. (1957) 581713 J.Mar.biol.Ass.U.K., 36:227-31 Notes on oxygen sampling on the Fladen Ground

Comparison of oxygen & phosphate data from Fladen Ground & redermination of the factor for conversion of oxygen . consumption to phosphate liberation.

581716 Nicol, J.A.C. (1957) J.Mar.biol.Ass.U.K., 36:261-9 Luminescence in polynoids. II. Different modes of response in the Elytra

Experimental electrical stimulation of Polynoë, Lagisca & Gattyana.

GLK:tl

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GLK:sjh

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Nicol, J.A.C. (1957) J.Mar.biol.Ass.U.K., 36:271-3 Luminescence in polynoids. III. Propagation of excitation throunerve cord		Carlisle, D.B. (1957) J.Mar.biol.Ass.U.K., 36:291-307 On the hormonal inhibition of more in decapod crustacea. II The term anecdysis in crabs	
Experiment with Gattyana.		Indocrinological assays in <u>Carcinaconas</u> & <u>Maia squinado</u> . Notes on mortality and feeding.	nus
GLK:sjh	M	CLK:sjh	M
Russell, F.S. (1957) J.Mar.biol.Ass.U.K., 36:275-9 On a new species of scyphomedus Atolla vanhöffeni n. sp.	581718 a,	Dales, R.P. (1957) J.Mar.biol.Ass.U.K., 36:309-16 Some quantitative aspects of feed sabollid and scrpulid fan worms	581721 ding in
Description of distribution of wyvillei.	<u>A.</u>	Rates of filtration studied for several spp. of differing sizes, graphite suspensions & algal cultomparisons with Chaetoptorus & cinvertebrates.	tures.
GLK:sjh	М	GLKesjh	M
Gotto, R.V. (1957) J.Mar.biol.Ass.U.K., 36:281-90 The biology of a commensal cope Ascidicola rosea Thorell, in th ascidian Corella parallelogramm. Study of feeding activities & reproductive bohaviour.	0	Armstrong, F.A.J. (1957) J.Mar.biol.Ass.U.K., 36:317-21 Phosphorus and silicon in sea wat Plymouth during 1955 Temperatures & salinity, phosphat total phosphorus & silicate analy water from the International Hydr Station I I during 1955 are discumpled to the seasonal variation is shown & irrogularities are pointed out.	se, rses of rographic ussed.
GLK: sjh	M	GLK: tl	M

581723 Southward, A.J. (1957) J.Mar.biol.Ass.U.K., 36:323-34 On the behaviour of barnacles. III. Further observations on the influence of tomporature and age on cirral activity

Experiments with spp. of Lepas, Balanus, Hexelasma from a wide range of habitats.

Bagonal, T.B. (1957) 581726 J.Mar.biol.Ass.U.K., 36:377-82 Annual variations in fish focundity

Data for Hippoglossoides platessoides (Fabr.) compared with Simpson's (1951) data for Pleuronectes platessa L.

GLK:sjh

M

GLK:sjh

MF

581724 Collyer, D.M. (1957) J.Mar.biol.Ass.U.K., 36:335-7 Viability and glycogen reserves in the newly liberated larvae of Ostroa edulis L.

Samples of 12 broods of oyster larvao were subjected to a standard laboratory rearing technique while other samples were assayed for glycogen. No correlation was observed between the glycogen reserve and either the size of the larvae at liberation or the yield of spat in the rearing experiments.

W

581727 Morton, J.H., A.D. Bonoy & 3.D.S. Corner (1957)J.Mar.biol.Ass.U.K., 36:383-405 Tho adaptations of Lasaca rubra Montagu, a small intertidal lamellibranch

Membury, & experiments on behaviour & physiological relations to degree of submersion.

GLK:sjh

GLK:sjh

MF

581725 Bagonal, T.B. (1957) J.Mar.biol.Ass.U.K., 36:339-75 The breeding and focundity of the long rough dab Hippoglossoides platessoides Fabr. and the associated cycle in condition

Longth-weight relation, age & size of maturity, focundity & its relation to weight, age, length. Appendices give the methods of the analysis used.

581728 Powell, H.T. (1957) J.Mar.biol.Ass.U.K., 36:407-32 Studies in the genus Fucus L. I. Fucus distichus L. emend. Powell

Taxonomic status & nomenclature of the hormaphrodite forms of Fucus (other than the alga currently known as F. spiralis L. & certain hybrid forms) usually incl. under the name Fucus inflatus L. by Juropean authors, is discussed. The forms described are best interpreted as forms of a single plastic & widely distributed species.

GLK:sjh

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GLK:sjh

	-	На применя	-
Ross, D.M. (1957) J.oxp.Biol., 34(1) Quick and slow contractions in tisolated sphineter of the sea ar Calliactis parasitica	the	Bruun, A.F. & al. (Ed.) (1957) Georgo Allen & Unwin, London, 296 The GALATHEA deep sea expedition	581732 P•
	M		M
Wells, M.J. & J. Wells (1957) J.exp.Biol., 34(1) The function of the brain of Oct in tactile discrimination	581730	Schaefer, M.B. (1957) Trans.N.Amer.Wildl.Conf., (22):47 Utilization and conservation of tresources of the eastern tropical Pacific Ocean Discussion, with contributions by McHugh, Silliman & Gunter.	he tuna
	NI.	SJH:sjh	M
Smith, J.E. (1957) Phil.Trans., 240B:135-96 The nervous anatomy of the body sogments of nereid polychaetes	581731	Gessner, F. (1957) Arch. Hydrobiol. (Plankt.), 53(1):1 Van Gölü. Zur Limnologio dos gros Soda-Soos in Ostanatolion (Türkei (Van Gölü. On the limnology of the soda-lake in East Anatolia (Turke Description of the morphology & g of the Van-Basin, depth, distribu temperature in the lake & its che Plankton lists & notes on general biological problems of soda-lakes	son) great y) cology tion of mistry.
	\. \f	TL:tl	F

Endean, R. (1957) 581735

Aust.J.Mar.Freshw.Ros., 8:233-73

The biogeography of Queensland's shallow-water echinoderm fauna (excluding crinoidea), with a rearrangement of the faunistic provinces of tropical Australia

Contents as per title.

GLK: hr

M

Laseron, C.F. (1957) 581736

Aust.J.Mar.Freshw.Res., 8:274-311

A new classification of the Australian marginellidae (mollusca), with a review of species from the Solanderian and Dampierian zoogoographical provinces

Divides the approximately 200 spp. into 33 genera, of which 31 are new & 2 have been recently named from Japan. Reviews all the known spp. from the Solanderian & Dampierian zoogeographical provinces.

GLK:hr

M

Stephenson, W. & J.J. 581737 Hudson (1957)

Aust.J.Mar.Freshw.Ros.,8:312-68
The Australian portunids (Crustacca; portunidae). I. The genus Thalamita

21 spp. are recorded from Australia, incl. 3 new spp. & 10 new records. These are described & illustrated, & a key is given for the known Indo-West Pacific spp.

GLK: hr

<u>M</u> -

Alm, G. (1957)

Rep.Inst.Freshw.Res.Drottning, (38):5-69

Avkastningen av gädd- och abborrfisket vid Sveriges östersjökust under åren 1914-1955 (The yield of the pike and perch fisheries along the Baltic coasts of Sweden during the years 1914-1955).

A study based on an examination of commercial catch statistics, the biology of the spp. (Bsox lucius & Porca fluviatilis), & the methods of fish management with a view toward determining the size of the catch, its fluctuations, & the underlying causes.

GLK:wad * M

Lindroth, A. (1957) 581739

Rop.Inst.Froshw.Res.Drottning, (38):70-108

A study of the whitefish (Coregonus) of the Sundsvall Bay district

Presents the results of investigations, 1951-56, concerning the spp. (C. lavaretus & C. nasus) & their genetical nature, their movements based on tagging, spawning, & the biology of the eggs, & young stages of C. lavaretus.

GLK:wad

Lindroth, A. (1957) 581740

Rep.Inst.Freshw.Res.Drottning,(38):109-30

Baltic salmon fluctuations: a reply

Boing largely a discussion of a paper by Svärdson, G. (1955) "Salmon stock fluctuations in the Baltic Sca", Rep. Inst.Freshw.Res.Drottning, (36):226-62, in which analysis are made of various theories concerning the abundance of Salmo salar. An addendum, pp. 128-9, contains a further reply to 581763.

GLK: wad

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Lindström, T. (1957) Roos, T. (1957) Rop. Inst. Freshw. Ros. Drottning, (38):131-52 Rop. Inst. Froshw. Res. Drottning, (38):167-93 Sur les planctons crustaces de la zone Studies on upstream migration in adult littorale (On the planktonic stream-dwelling insects. I. crustacca of the littoral zone). Describes methods & results of studies in northern Sweden of a mechanism presumed Discusses the abundance & distribution to ensure a balance & retention of a in both running & standing waters. population in its habitat which would otherwise be depopulated through downstream drift. \mathbf{F} GLK: wad \mathbb{F} GLK: wad 581745 Nybrant, G. (1957) 581742 Runnström, S. (1957) Rep. Inst. Freshw. Res. Drottning, (38):194-Rep. Inst. Froshw. Res. Drottning, (38):152 Remarks concerning the flow through Lake Håckren Migration, age, and growth of the brown trout (Salmo trutta L.) in lake Rensjön A brief description of water exchange Studies in northern Sweden based on in a Swedish lake with 2 basins based on trapped and marked fish & including a temperature records. study of migration in the char, Salvelinus alpinus. GLK: wad F GLK: wad \mathbb{F} Svärdson, G. (1957) 581746 Nilsson, N.-A. (1957) 581743 Rop. Inst. Freshw. Res. Drottning, (38): 154-66 Rep. Inst. Freshw. Res. Drottning, (38):267-On the feeding habits of trout in a The coregonid problem. VI. The Palestream of northern Sweden arctic species and their intergrades A study of stomach contents of Salmo Discusses the genus Coregonus & describes trutta from Lake Rensjön & River Rensjöan the following spp.:pidschian, nasus, lava-& some comparisons with those of Lota rctus, oxyrhynchus, peled, albula & lota. baunti; describes experiments on the phenotypical variation of whitefishos; presents whitefish & cisco populations of Sweden & Baltic coast; reviews whitefish

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GLK: hr

GLK: wad

populations of Europe outside Sweden.

F

von Arx, W.S. (1957) 581747

In "Physics and chemistry of the earth",

Vol. 2, by Ahrens, L.H. & al. (Ed.), 1957

Porgamon Press, London, :1-29

An experimental approach to problems in physical oceanography

Description of experiments conducted with models of small inshere areas, of intermodiate size areas, and of planetary phenomena.

GLK:glk

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GLK:glk

Wales

Racck, A.A. (1957)

trenches.

Hill. M.N. (1957)

occan floor

In "Physics and chomistry of the earth",

Vol. 2, by Ahrons, L.H. & al. (Ed.), 1957,

Recent geophysical exploration of the

Discusses gravity measur ments at sca

prospecting & heat-flow measurements at

during the period 1945-55, seismic

soa, occan structure & surfaco-wave

dispersion, volcanic islands & coral atolls, & the structure of deep sea

Res. Bull. St. Fish., N.S. W., (3):19 p.

Penacid prawn fisheries of Australia

with special reference to New South

Account of the history & problems of ponacid prawn fisherics in N.S.W. &

Queensland of biological & ecological

of observations on spawning. A key of

the 17 commercially taken spp.

investigations of newly discovered deepsea grounds, of marking experiments, &

Pergamon Press, London,:129-63

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5817**5**1

581750

Sandors, H.L. (1957) 581748 System.Zool., 6:112-28 The Cophalocarida and crustacean phylogeny

In an effort to indicate crustacean phylogeny, as well as to illustrate the affinities of the Cophelocarida with the extant subclasses of crustacea, compares the paleozoic arthropods, particularly the crustacea, with the crustacean subclass Cophelocarida, as exemplified by Rutchinschiella.

HR:Glk

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GLK:glk

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Richards, F.A. (1957) 581749

In "Physics and chemistry of the earth",

Vol. 2, by Ahrens, L.H. & al. (Ed.) 1957,

Pergamon Press, London,:77-128

Some current aspects of chemical

ocoanography

Tabulates & discusses major & minor constituents; dissolved atmospheric gases - conservative properties, & biochemical relations in the ocean.

GLK:glk

M

Wiborg, K.F. (1957) 581752
Fiskeridir.Skr.Havundersøk., 11(8):24 p.
Factors influencing the size of the year classes in the Arcto-Norwegian tribe of cod

Occurrence of eggs & larvae during 1948-56 has been studied quantitatively & relation of their abundance with relative strength of corresponding year classes in commercial catches has been examined. Changes in mortality in early life have been sought. Relations of various factors with survival of young have been examined.

GLK:glk

Kusaka, T. (1957) 581753 Bull. Jap. Soc. sci. Fish., 23(1):1-5 (Experiments to see the different effects of net on driving, several species of fish). Ni

Continuation of experiments described in Bull. Jap. Soc. sci. Fish., 22(11), 1957, (581754, 581755), using Cyprinus carpio, Carassius auratus, Oryzias latipos, Acheilognathus lanccolata, & Chacnogobius annularis urotacnia, & varying the longth of the tank.

SJH:sjh

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SJH:sjh

Inoue, M. (1957)

them.

Inoue, M. (1957)

Bull.Jap.Soc.sci.Fish., 23(1):6-8

Ohara fleets doubled their fishing

sardine purse seine fishery).

(The effect of wireless telephone on

Treats catch statistics of the flects in

Chiba Prefecture & shows that Katagai &

ability by using wireless telephone for

exchanging fishing information among

M

581757

581756

Kusaka, T. (1957) 581754 Bull.Jap.Soc.sci.Fish., 22:662-7 (Two experiments to see the effect of mesh size of nets on driving a school of fish to a certain point).

Reports observations on locomotion of Carassius auratus in tanks in relation to moving vertical screens of white cotton throad with various spacings.

F

Bull.Jap.Soc.sci.Fish., 23(1):9-11 Study on fishing abilities of sardino boach seine on Kujukuri-hama).

Treatment of catch statistics shows correspondence of decreasing beachseine catches with increasing pursescine fishery wince 1954, with respect to sardine & horse mackerel.

SJH: sjh

SJHssjh

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Kusaka, T. (1957) 581755 Bull.Jap.Soc.sci.Fish., 22:668-73 Experiments to see the effect of colour on nets by the contralizing method and the driving to one side method). Νi En

Locomotion of Carassius auratus in tanks in relation to moving vertical screens of 5 vinyle tubes of different colours & transparencies. Results compared with previous experiments of relation of net efficiency to thread colour.

SJH:sjh

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581758 Tanaka, S. (1957) Bull.Jap.Soc.sci.Fish., 23(1):12-8 Relation between Baranov's mathematical model and sigmoid curve

Determination of population growth characteristics predicted by a simple analytical population model (derived from Baranov's) applied to data for Cleisthenes herzonsteini, & comparison of steady-state & transitional states described by it with the properties of the Verhulst-Pearl logistic model as it has been applied to fish stock assessment problems.

SJH:sjh

MF

Takouchi, T. & al. (1957) Bull. Jap. Soc. sci. Fish., 23(1):19-23 (Bacteriological studies on the unusually high mortality of Ostroa gigas in Hiroshima Bay. III.).

Isolation of micro-organisms from the dead oyster; histo-pathology of infected survivals; mode of infection by mouth & digestive tract.

M

Stjerna-Pooth, J. (1957) 581762 Rep. Inst. Freshw. Res. Drottning, (38):247-66 Achlya prolifora als Abwasserpilz in cinom mittelschwedischen Wasserlauf (Achlya prolifera as a saprolegnia fungus in a brook in middle Sweden)

Description of lush growth of the fungus in a polluted stream; ecological & physiological invostigations on the reasons of the lush growth.

SJH:sjh

GLK: tl

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581760 Iitaka, Y. (1957) Bull.Jap.Soc.sci.Fish., 23(1):24-6 Study on the fishing capacities of purse scinos. II. On difference between single and double purse scines operating in Wakasa Bay

Statistical examination of catch records of sardino, mackerel & horse-mackerel by the kinds of seine shows little difference between their performance.

. M

Svärdson, G. (1957) 581763 Rop. Inst. Freshw. Res. Drottning, (38):357-84 Laxon och klimatet (Salmon and climate).

Discussion of the possible influence of climate on various life phases of Atlantic salmon, & the reasons of variations in year-class strength.

SJH:sjh

GLK:tl

MF

Itazawa, Y. (1957) 581761 Bull.Jap.Soc.sci.Fish., 23(1):27-32 (Comparison of four different methods for the determination of the dissolved oxygen in the fish-culture-pond water). Ni En

Experimental comparison of Winkler's iodomotric, Millor-Sibata's forrous, Winklor-Sugawara's CO2, & Van Slyko's manomotric methods, & the effect on the results of micro-phytoplankton absorbing iodine in the case of the first, of indistinctiveness of titration end-point in the second, & of the water salinity.

SJHasjh

Wallin, 0. (1957) 581764 Rop. Inst. Froshw. Res. Drottning, (38): 385-44 On the growth structure and developmontal physiology of the scale of fishes

A very detailed study, based mainly on the reach & containing an extensive roview of the literature.

GLK: wad

FI

581768 Sarig, S. (1957) 581765 Bliss, C.I. (1957) Bamidgoh, 9:47-9,43-5 Amer. Scient., 45:449-66 The importance of controlling coarse Some principles of bioassay vegetation in fish ponds. Contains general principles that may be Strates briefly the aspects in ponds in useful in work with aquatic organisms. reclaimed weedy marshes in Israel & the past efforts at mechanical, chemical & biological control of weeds. SJH:tjj F MF TL:wad Lipshitz, N. (1957) 581766 581769 Greig-Smith, P. (1957) Bamidgeh, 9:50-62, 46-62 Butterworths Scientific Publ., London, The control of noxious weeds in fish ponds. Ξn Iw Quantitative plant ecology Describes the components of vegetation A general text-book dealing with belts & their control with special quantitative description of vegetation, reference to the herbicides 2,4-D, sampling, comparisons, species associ-2,4-D osters, 2,4,5-T, sodium arsonike, ations, correlation with habitat factors. Dalapon & C.M.U. Appendices discuss the interpretation of meteorological data, the area of distribution & spread of spp. & give some useful statistical tables. SJH: tii F MF SJH: sjh Taylor, C.C., H.B. Bigelow & 581770 Russell, R.J. (1957) 581767 Amor. Scient., 45:414-30 H.W. Graham Fish.Bull., U.S., (115):293-343 Instability of sea level Climatic trends and the distribution of marine animals in New England Review of the changes of sea level in the past geological eras & theories for tho reasons of these changes. Relation indicated between: catches of Scomber scomber & air temperature fluctuations over 130 years; lobster menhaden Merluccius bilinearis landings & inshore water temperatures; Limanda ferruginea & "trash" species. Evidence of major ecological changes incl. new northern limit records of southern spp. since 1930 but no southward extensions; but no obvious alterations of general faunal TL:tl characteristics. M

SJH:sjh

Ananiados, C.I. (1957) 581771 Proc.gen.Fish.Coun.Modit., (4):33-6 Lothal offocts of chlordanc on carps. Πn Describes the effect of chlordane on corps in rice fields & in experimental tanks. Comparison is made with D.D.T. FiBshr Monteiro, R. (1957) 581772 Proc.gon.Fish.Coun.Modit., (4):37-42 Itudes sur la biologie de la famille des triglidae (Study on the biology of the triglidae). Gives metric & meristic characteristics based on catches of the occanographic vessel PROF. LACAZE-DUTHILRS.

581774 Iyigüngör, D. (1957) Proc.gen.Fish.Coun.Medit., (4):63-8 La pêche aux crevettes en Turquie (Shrimp fishing off the Turkish coasts).

Describes fishing localities, size & weight, gear, seasons, consumption, production & potentialities.

FiB:hr

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581775 Nümann, W. (1957) Proc.gon.Fish.Coun.Modit., (4):69-74 Los résultats des expériences de marquage sur les pélamides et les maquereaux dans les eaux turques (Rosults of marking experiments on short finned tunas and mackerels in Turkish waters).

A study of migration, spawning areas & ; growth of short-finned tuna & mackerel.

Proc.gon.Fish.Coun.Modit., (4):75-8

Introduction en Italie des boîtes d'ale-

FiBshr

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FiB:hr .

Sommani, E. (1957)

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581776

Olivor, M. (1957) Procegon. Fish. Coun. Modit., (4):51-62 Biologio de la sardine des Baléares (frai alevinage et développement au cours de la promière année) (Biology of the sardine of the Balcaric Islands (spawning, hatching and growth during the first year)). :In

Contents as por title.

vinago: application, limitos et possibilités du système (Introduction in Italy of hatching boxes: application, limits and possibilities of the system). In

Hatching boxes have been used in Italy & good results were obtained particularly in the Alps. This system is less

tho floods; it is not advisable in relatively high temperature streams (damago caused by larvae of insects) as well as in those where temperature is

normally very low. FiB:hr

FiB:hr

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convenient in the Appenines because of

Sommani, H. (1957) 581777 Procegon. Fish. Coun. Medit., (4):79-83 Considérations générales et particulières sur la mise en valour des lacs de barrage (General and special considerations concerning the exploitation of barrage lakes).

Most of the barrage lakes fall into 2 categories: quick agoing basins; slow agoing basins. Lach category needs a different method of exploitation in order to obtain the best results. The possible management of small bodies of water used for irrigation is also considered.

FiBshr

Larraneta, M.G. (1957) Proc.gon. Fish. Coun. Modit., (4):109-12 Présence du parasite Peroderma cylindricum Heller sur la sardine de Castellón ct d'Alicante (Presence of Peroderma cylindricum Heller parasite on sardines of the Castellon and Alicante coasts).

Lives on the young specimens & causes a loss of weight & sometimes a total castration, but it does not appear to be a danger to productivity.

FiB:hr

M

581781

Akyüz, E.F. & I. Artüz (1957) 581778 Proc.gon.Fish.Coun.Medit., (4):93-9 Some observations on the biology of tuna (Thunnus thynnus) caught in Turkish waters.

Study of the sex maturity, length & weight of the Turkish tuna catches in 1955-56. The spawning season is considered to extend from late July to early September. Migration seems to be connected with the temperature & the migration of other polagic species.

FiB:hr

Proc.gon.Fish.Coun.Modit., (4):113-7 Notes sur la biologie et la pêche des thons (Notes on the biology and fishing of tuna).

Lozano Cabo, F. (1957)

The number of tuna coming each year from the Atlantic coast of Spanish Morocco is nearly constant (12,000 or 13,000 tunas), with a maximum & minimum each eight years. The main invasion takes place apparently when the maturity index is between 40-60.

FiB:hr

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Larraneta, M.G. & J. López (1957) 581779 Proc.gon.Fish.Coun.Modit., (4):101-8 La croissance de la sardine (Sardina pilchardus Walb.) de la côte de Castellón (The growth of the Castellon coast sardine (Sardina pilchardus Walb.)). En

Determination of the relations between the length of the fish & the length of the scales. The maximum size limit is estimated at 197 mm. The relation of size-weight is given for whole & eviscorated fish, & evidence is given of the different growth rate for the Castellón & Alicante sardines. FiB:hr

581782 Domir, M. (1957) Proc.gen.Fish.Coun.Medit., (4):127-33 Migrations of Sarda sarda Bloch in tho Black, Marmara, and Aegean seas; the probable spawning places and time. Fire

The species spend the summer in the Black Soa, and the winter in the Sea of Marmara & the Acgean Sea where they reproduce .

FiB:hr

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Domir, M. & N. Arim (1957) 581783

Proc.gon.Fish.Coun.Modit., (4):135-9

Contribution to the biology of the mackerel (Scomber scomber L.). Fr

Deals with the spawning period, places & dopths of ripening & discharge of oggs & some other related problems about the eggs & larvae of the mackerel of the Sea of Marmara & of the Black Sea.

FiB:hr

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Mackerol do not select certain specific foods, but eat whatever they find in their surroundings. Both in the Bosphorus & in the Marmara the fish keep to the waters coming from the Hediterranean & are only able to telerate the intermediate

level when rising to search for food.

Proc.gen. Fish. Coun. Mcdit., (4):193-6

The relation between the water

Rolation between the migration of Sarda

sarda Bloch and provailing temperature.

temporature & the migration of the Sarda

& Dardanelles has been studied. Also the

influence of sea temperature on catches

sarda while they are in the Bosphorus

Marmara, the Bosphorus & in the areas of the Black Sea bordering the Bosphorus.

Proc.gon.Fish.Coun.Modit., (4) 181-92

Contents of the stomachs of mackerel (Scomber scomber L.) caught in the

Nalbandoglu, U. (1957)

FiB:hr

Acara, A. (1957)

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581787

581786

Domir, M., A. Acara & 581784
N. Arim (1957)
Proc.gen.Fish.Coun.Modit., (4):141-3
About the sword-fish (Xiphias gladius L.).
Fr

Doals with the fishing regions, spawning area in the Sea of Marmara, methods of fishing by harpoon & the reason for the special behaviour of the sp. during the fishing period in May.

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has been shown.

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Tuggaç, M. (1957) 581785

Proc.gon.Fish.Coun.Modit., (4):145-59
On the biology of the Scomber colias
Gmelin. Fr

A study of length, growth & age, sexual maturity, state of gonads & eggs, body weight & stomach contents of the sp. in Turkish waters.

Vives, F. & P. Suau (1957) 581788

Proc.gon.Fish.Coun.Modit., (4) 197-206

Sur la régénération des fonds de pêche du Levant espagnel (On the restocking of fishing grounds off the east coast of Spain). En

Description of the dragging nets used in the inshere waters of the east coast of Spain, & of experiments made with cod ends of various mesh-size in relation to size of fish caught. Consideration on spawning period & fishing of fingerlings & description of a method to permit the restocking of the fishing grounds.

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Vivier, P. (1957) 581789 Proc.gon.Fish.Coun.Modit., (4):207-17 Importance des tests biologiques dans la protection des rivières contre la pollution (Importance of biological tests for the protection of rivers against rollution).

Description of the biological test used in Laboratories & on the spot, to study the action of poison on the aquatic fauna & flora.

Bas, C. (1957) 581792 Procegon. Fish. Coun. Modit., (4):235-41 La géographie du fond et l'état actuel do la pôcho dos espèces d'intérêt (Geography of the sea industricl bottom and situation of the species of commercial importance).

Description of the relations between the characteristics of the bottom & the fish spp. found off the coast of Catalonia.

Proc.gon.Fish.Coun.Mcdit., (4):243-50 Extensive investigations of captures by

ottor-trawl in the Adrictic off shore

A report is made of catches of fish &

edible invertebrates taken by trawling

with otter-trawl at 137 stations in the Adriatic. The taxonomic composition of the catches by weight & numbers is given.

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waters.

Karlovac, 0. (1957)

Fr

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581793

Gamulin, T. & J. Karlovac (1957) 581790 Proc.gon.Fish.Coun.Medit., (4):219-26 Données récentes concernant la densité dos ocufs de sardino (Sardina pilchardus Walb.) sur une frayère de l'Adriatique moyenne (Recent data concerning the distribution of sardino (Sardina pilchardus Walb.) eggs on a spawning ground of tho central Adriatic).

Creat quantities of catches, made vertically, have made it possible to determine the number of eggs by square ther during the entire spawning season.

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FiB:hr

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Vicetiá, T. (1957) 581791 Proc.gon.Fish.Coun.Medit., (4):227-33 Quolques observations sur l'ócologio de la ponte de l'anchois (Engraulis encrasicholus L.) dans los lacs do l'îlo do Mljet (Some observations on the ecorogy of the spawning of anchovy (Ingraulis encrasicholus L.) in the lakes of Mljot Island).

Contains data on: spawning season, vertical distribution of the eggs & the layers in which the spawning takes place, time of expolling of the eggs as well as the duration of the embryonic development according to temperature. M FiBahr

Iyigüngör, D. (1957) 581794 Proc.gon.Fish.Coun.Modit., (4):251-5 Môthodes et moyens de pêche au thon actuellement en usage en Turquie (Methods and gear at present in use for tuna fishing in Turkey).

Tunas are caught with traps & hooks & lines. Mach of these methods is extensively described.

FiBahr

Morlo, S. (1957) 581795

Proc.gon.Fish.Coun.Modit., (4):257-67

La pôche et le repeuplement des salmonidés dans le lac de Garde (Fisheries and restocking of the lake of Garda with salmonid species). In

Description of the main biological characteristics of salmonids in the lake of Garda & various fishing methods omployed. The catches & the measures taken for the restocking of the lake are studied in special chapters of the report.

FiB:hr

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Akyüz, E.F. (1957)

environment.

included.

Perlmutter, A., L. Bograd &

Proc.gon.Fish.Coun.Mcdit., (4):289-303

Use of the estuarine & sea fish of the

Experiments show that Mugil cophalus is

the most suitable for introduction into

carp ponds. A key for the identification

of these small mullets & notes on their

habitats & seasonal availability is

Proc.gon.Fish.Coun.Modit., (4):305-26

Observations on the Iskenderun red

Fr

the Gulf of Iskonderun to study the

Special attention was given to red

Investigations have been carried on in

hydrography of that zone & to collect

biometrical data for the demorsal species

mullet (Mullus barbatus) and its

family Mugilidae (Grey mullets) for

J. Pruginin

pond culture in Israel.

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581799

(1957)

Ben-Yami, M. (1957) 581796

Proc.gon.Fish.Coun.Medit., (4):269-80

Proliminary report on experimental fishing with an improved type of trawlnet.

Fr

A new type of trawl-net incorporating the best features of the Italian & Atlantic type trawls has been developed. This net proved more efficient than the Italian net in actual comparative fishing.

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mullet.

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Gottlieb, E. & O.H. Oren (1957) 581797 Proc.gen.Fish.Coun.Medit., (4):281-7 Savings gear experiments with trawl nots in Israel waters. Fr

Experiments undertaken to determine the size of mesh of cod-end that would release under-sized fish, resulted in that a mesh size of 54 mm. was recommended for use in the fishery.

FiB:hr

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Matta, F. (1957) 581800

Proc.gen.Fish.Coun.Mcdit., (4):327-33

Sur la biométrie de la sardine (Sardina pilchardus Walb.) de la mer Tyrrhénienne (Biometry of the sardine (Sardina pilchardus Walb.) of the Tyrrhenian sea).

The following somatic propertions: lateral length of the head, pre-dersal length, pre-ventral length, pre-anal length do not indicate differences worth mentioning when compared with the variations in the total length of the fish or when analyzed in connection with the sexual state.

FiB:hr

Komarovsky, B. & L. Schwartz (1957)581801

Proc.gen.Fish.Coun.Modit., (4):347-61

A study of marine antifouling paints in

Lsrael. Fr

Raft tests were carried out in the Haifa Harbour area on the effectiveness of antifouling paints containing graded amounts of cuprous exide at various pigment volumes; the seasonal sequence & relative abundance of the main fouling groups are described.

Bon-Tuvia, A. (1957) 581804 Proc.gon.Fish.Coun.Modit., (4):383-91 Polagic fisherios in Israel. Fr

Sardinella aurita is commercially the most important pelagic sp. There are evidences of an existence of a distinct local population along the Palestinian coast. Other pelagic spp. & their method of fishing are briefly surveyed.

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Fried, Z. (1957) 581802

Proc.gon.Fish.Coun.Modit., (4):363-9

Undorwater study of the Italian type trawl gear. Fr

An underwater study of the Italian trawl, with the aid of aqua-lungs, was made with emphasis on the net itself. Fishing height & spread were measured, & general behaviour of the trawl in action was observed directly & photographed.

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Santos Pinto, J. dos & 581805

B. Andreu (1957)

Proc.gen.Fish.Coun.Medit., (4):393-411

Echollo pour la caractérisation des phases évolutives de l'ovaire de sardine (Sardina pilchardus Walb.) en rapport avec l'histophysiologie de la genade (Scale for the determination of evolutive phases of sardine (Sardina pilchardus Walb.) evaries in connection with the histophysiology of the genad).

The existence of 3 clearly individualized stocks of everytes makes it possible for the sardine to spawn more than once during a season, & as a result, the international herring scale cannot be applied.

Svetina, M. (1957) 581803 Proc.gon.Fish.Coun.Medit., (4):377-81 L'ombre et sa reproduction artificielle (The grayling and its artificial spawning). En

After having dealt with the biology of the grayling (Thymallus vulgaris Nils.) & considered the importance of that fish, the author describes the technique applied for artificial spawning.

581805 (Card 2)

The authors propose a new scale of 6 phases applying to the sardine.

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581807 Catić, Dj. (1957) Proc.gon. Fish. Coun. Medit., (4): 421-6 Los vitamines et l'alimentation de la truite commune et de la truite arc-on-(The vitamins and food of the common trout and of the rainbow trout).

The addition of plankton to the basic food of the young common & rainbow trouts has given excellent results, while the products containing vitamins soom to be only of secondare importance. However, dried yeast (Vitamin B) has a favourable action & can be used when the quantity of plankton is not sufficient. Wild alim

Kieler Meeresforsch., 13(2):163-85 Ergobnisso cines hydrographisch-produktionsbiologischen Längsschnitts durch die Ostsoe im Sommer 1956. I. Die Verteilung von Temporatur, Salzgohalt und Dichto (Results of hydrographical productionbiological section through the Baltic Sch in the summor 1956. I. Distribution of temperature, salinity & density).

Tabulated & goographical data with analysis & with special emphasis on the micro-stratification.

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Wüst, G. (1957)

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581810

Krotov, A.V. (1957) 581808 Proc.gen.Fish.Coun.Modit., (4):427-30 Les recherches soviétiques sur la biologic des principaux poissons do la mer Noire (Soviet research on the biology of the main fish species in the Black Sca).

After having stressed the attention devoted by the USSR to the study of the biology the Black Sea species & mentioned the various fields in which research has been undertaken, the author summarizes the conclusions reached concerning anchovy, horse-mackerol, bonito & mackerel. FiB:hr

Banse, K. (1957) 581811 Kicler Mecrosforsch., 13(2) 186-201 Argebnisse cines hydrographischproduktionsbiologischen Längsschnittes durch die Ostsee im Sommer 1956. II. Die Verteilung von Sauersteff, Phosphat und (Results of suspendierter Substanz hydrographical production biological section through the Baltic Sea in the summer 1956. II. Distribution of oxygon, phosphate and suspended matter).

Tabulated & graphical data with analysis (incl. data on chlorophyll, albumin & total seston).

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Ahlstrom, H.H. & D. Kramor (1957) 581809 Spec.sci.Rep.U.S.Fish.Wildl.Serv., (224) & 90 p.

Sardino eggs and larvae and other fish larvac, Pacific coast, 1955

Quantitative sampling off the coasts of California & Baja California at stations usually occupied at monthly intervals, for <u>Sardinops caerulea</u>, <u>Engraulis mordax</u>, <u>Trachurus symmetricus</u>, <u>Proumatophorus</u> diego, Merluccius productus & Sebastodes spp.

GLK:glk

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Logand, M. (1957) Rapp.sci.Sect.Océanogr.franç.Océanie, (2) 31 p.

Variations quantitatives du zooplancton récolté par l'ORSOM III pendant la croisièro 56-4 (EQUAPAC) (Quantitative variations of zooplankton collected by ORSOM III during the cruise EQUAPAC).

Description of relations between the amounts of zooplankton & various physicalchemical environmental factors & correlations with C14 fixation, & the occurrence of pelagic fish. (Profiles taken 1°N -17°S & 170°E - 177°E). TIETA M

	entrange, someway provinces and a six a		
Chaine, J. (1957) Bull.Cent.Etud.Roch.sci., Biard 463-557 Recherches sur les otolithes de Ltude descriptive et comparative sagitta des Teleostéens (70 par fascicule) (Study of otolit fish. Descriptive and comparative of the sagitta of Teleosteans (4th fascicule))	es poissons re de la rtie, 40 ths of live study	Bourrelly, P. (1957) Bull. Cent. Etud. Roch. sci., Biarritz 589-91 Une nouvelle espèce de Cyanophycée d'eau douce du genre Desmosiphon new fresh water species of Cyanoph of the genus Desmosiphon) A note on Desmosiphon vivieri.) (A
Gives size of otolith & fish, description & variations of oto spp. of the families Trachinida scopidae, Scombridae, Carangida Acronuridae & Pomatomidae. FiB:hr	e, Urona-	F i B; h r	Ŧ
Mousset, G. (1957) Bull.Cont.Etud.Rech.sci., Biarr 559-61 Sur la maturation sexuelle du ((On the sexual maturity of Cong Induction of maturation of Cong vulgaris in aquarium by injecti urino & hormones.	Congre	Bourrolly, P. (1957) Bull.Cont.Itud.Rech.sci., Biarritz 595-600 Un genre de Rhodophycée d'eau doue nouveau pour la France, Kyliniella récolté dans les environs de Biarricella, a new genus of fresh Rhodophyceae for France, collectes surroundings of Biarritz) A descriptive note on Kyliniella I	z, 1: ce 2, ritz water l in the
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Dubedout, C. (1957) Bull.Cent.Ltud.Rech.sci., Biarr 563-5 Adaptation on aquarium des anim au moyen d'un bac submersible (Adaptation in aquarium of mari by means of a submerged jar) Results of experiments made wit lings of Athorina presbyter.	eitz, 1: haux marins he animals	Lobouché, AM. (1957) Bull.Cont.Etud.Roch.sci., Biarritz 601-35 Litude des glucides de Caulacauthus ustulatus (Mert.) Kütz (A stud glucosides of Caulacauthus ustulat (Mort.) Kütz) A study of anatomical, morphologic ecological characteristics of the followed by a biochemical investig & comparison with other Florideac.	y of tus cal & sp.
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1(5),106

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Khartoum, University. Gay, P.A. (1957) 581822 Rep.hydrobiol.Res.Unit, Sudan, (4):10-20 Hydrobiological Rosearch Unit (1957) The Middle East Press, Khartoum, 32 p. Fourth annual report of the Hydro-Survey of work in progress - Some aspects of the riverain flora of the biological Research Unit White Nile and the Bahr ol Ghazal Staff mombers, facilities & equipment, Report on observations made during note on activities & survey of work in expedition Docember 1956. Papyrus progress. Comprises papers by Talling, distribution; sedimentation. Rzoska, Gay & Nawar (581820, 581821, 581822, 581823, 581824 & 581825). List of papers published during the poriod covered by the report, notes on sponges, on fauna of umbols of aquatic plants, & on Desmids of lake Ambadi. F GLK: sjh GLK:sjh Talling, J.F. (1957) 581820 Rzoska, J. (1957) 581823 Rep. hydrobiol. Ros. Unit, Sudan, (4):6-8 Rep. hydrobiol. Res. Unit, Sudan, (4):20-4 Survey of work in progress - Some Survey of work in progress - Zooplankton physical, chemical & algological aspects studies of Nile hydrobiology: a retrospect New crustacoans found in the Nilo; Brief review of work, indicating scxuality & population structure of unsolved problems. Daphnia & Cyclops spp., fish fry occurrences. F GLK:sjh F GLK:sjh Nawar, G. (1957) Rzoska, J. (1957) 581821 Rep. hydrobiol. Ros. Unit, Sudan, (4):24-7 Rep. hydrobiol. Res. Unit, Sudan, (4):8-10 Survey of work in progress - Preliminary Survey of work in progress - Conductivity investigations on breeding times of some of Nile waters Nile fishes Table of observations obtained, December, Occurrence of larvae of spp. of Mormyrus 1956. Laboo, Barbus, Auchenoglanis, Utropius, Hydrocyon, Tilapia, Alostes, Chelaethiopa & other genera. F \mathbf{F} GLK:sjh GLK:sjh

Rzoska, J. (1957) 581825 Rop.hydrobiol.Ros.Unit, Sudan, (4):28-30 Survey of work in progress - Observations on tropical temporary waters

Short summary of knowledge regarding physico-chemical condition of pools near Khartoum, & their planktonic crustacean communities (Anostraca, Metacyclops, Conchestraca, Triops & Moina).

GLK:sjh

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Hallgrimsson, I. (1957) 581826 Nättúrufraedingnum, 27:173-85 Dýrasvifid í sjónum (Zooplankton in Icelandic waters). En

Outline of the main features of the zooplankton in Icelandic waters. The drift of the zooplankton from Icelandic waters westwards to Greenland is discussed, & Danish investigations on the drift of the cod larvae from Icelandic waters are mentioned. A short account on the life history of Calanus finmarchicus is given.

FiB:tl

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Schaefer, M.B. (1957) 581827 Publ.nat.Res.Coun., Washington, D.C., (551):133-7

Large-scale biological experiments using radioactive tracers

Notes on the uptake & transport of radioactive isotopes by plants & animals observed in connection with weapon tests & waste disposal. Plans for future experiments are also indicated.

SJH:tl

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Rovollo, R. & M.B.

Schaefer (1957)
Publ.nat.Res.Coun., Washington, D.C.,

581828

(551):1-25

General considerations concerning the ocean as a receptacle for artificially radioactive materials

Summary of the nature of the ocean & marine resources; potential hazards from radioactive materials; chemical processes & the behaviour of radioactive materials in the sea, & the physical & biological processes affecting the distribution of radioactive materials in the sea; short account of major insolved problems is also added. SJH:tl

Brott, J.R. (1957) 581829 Bull.Fish.Ros.Bd Can., (114):26 p. Salmon research and hydroelectric power development

Outlines factors affecting migrating fish with examples from British Columbia & elsowhere in the Pacific Northwest & discusses research principles under: 1) energy dissipation, 2) stress & activity, 3) hormonal state, 4) behaviour & sensory perception, & 5) interaction of these, & the Boards' researches - past & prospective.

GLK:tjj

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581830

Hartman, W.D. (1957) Evolution, 11:294-7

Ecological niche differentiation in the boring sponges (Clionidae)

Considers the vertical ranges & relative abundance of 9 sympatric spp. of boring spenges (Cliona colata, C. vastifica, C. schmidti, C. albicans, C. viridis, C. vermifera, C. rovignonsis, Cliothesa hancocki, & Theosa mellis) of the Adriatic sea & the determining causes of their distribution.

GLK:hr

Waldichuk, M. (1957) 581831 Progr.Rop.Pacif.Cst.Stas, (108):3-6 Occanography of the Strait of Georgia. VII.Water masses

Characterization of different water masses by T-S relation in the Strait & some discussions on seasonal changes of the T-S characteristics and mixing.

Tabata, S. (1957) 581834

Progr, Rep. Pacif. Cst. Stas, (108):18-20

Hoat exchange between sea and atmosphere along the northern British Columbia coast

Notes on the components of the heat budget equation & graphical presentation of annual cycle of heat transfer across air-sea boundary.

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Horlineaux, R.H. (1957) 581832 Progr.Rep.Pacif.Cst.Stas, (108):7-9 On tidal currents and properties of the sea water along the British Columbia coast

Relations between daily tidal speeds, surface salinity & temperature, & discussion on the possibilities for prediction of minimum & maximum surface temperatures & salinities on the basis of the tidal current tables.

GLK:sjh

Aldordice, D.F. & J.R. 581835
Brott (1957)
Progr.Rop.Pacif.Cst.Stas, (108):27-9
Toxicity of sodium arsonite to young chum salmon

A note on tolerance tests with Onchorhynchus keta, as part of examination of possibility of using this chemical to control terodo (Bankia sp.) in logs being transported by sea.

GLK:tl

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Barbor, F.G. (1957) 581833

Progr.Rep.Pacif.Cst.Stas, (108):15-8

Observations of currents north of
Triangle Island, B.C.

Preliminary results of the continuous measurement of tidal currents on the continental shelf off Vancouver Island & calculation of residual currents in various depths (0 - 40 m).

Torada, K. & M. Hanzawa (1957) 581836 Goophys.Mag., Tokyo, 28(1):117-33 Recent works in relation to the activities of the Marine Division of the Japan Meteorological Agency

Recent developments in maritime meteorology; brief history of the weather ship observations; routine oceanographic observations & the oceanographic research activities; long range forecasting of ocean temperatures & oceanographic research of Ariako Bay.

GLK:t1

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Moorman, R.B. (1957) Iowa St.Coll.J.Sci., 32(1):71-88 Reproduction and growth of fishes in Marion County, Iowa, farm ponds Growth & condition of Microptorus salmoides, Lepomis macrochirus, Ameiraelas & Pomoxis annularis.		Porce, J.M. (1957) Rec.Trav.Sta.marit.Endoume Lesai de classement des co benthiques marines du glob of classification of marin communities of the world) Definition of the followin supralittoral, mesolittora circalittoral & epibathyal	mmunautés e (Essay o benthonic g stages: l, infralittoral
SJH:sjh F	ene den geler in vers (estigge) in diffre de la mentage in gen	CLK: hr	M
Alm, G. (1957) Sveriges Natur, 2:53-6 Tusenbröder (Fish stocks with exceptionally small growth of specim Discussions on the reasons of small growth of some fresh water fish (esply perch) in everpopulated waters & suggestions for improvement of these small-grown stocks.	ocial	Anonymous (1958) Now Scient., 4:115 Streamlining the tides at A note on the design of he heads to reduce scouring a	rbour pier
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Péròs, J.M. & R.Molinier (1957) 58 Rec.Trav.Sta.marit.Endoume, (22):5-1 Colloque tonu par le Comité du Benth (Gènes 10-11 Juin 1957) - Compte-ron des séances (Colloquium by the B Benthos Committee (10-11 June 1957) Report of the meetings) A discussion of the nomenclature & terminology of benthos zonation.	5 .os .du .ontho	Jackson, C.J. (1958) New Scient, 4:150-2 Water supply and demand A short review of water us a problems.	581842
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Svetovidov, A.N. 581336	581696	Von Brandt, A.	581403
Swann, L.G.	581479	Votintsev, K.K.	581687
Sysoiev, N.N.	581574	Vučetić, Ť.	581791
Szymborski, S.	581287		7-17.
	201201	Waldichuk, M.	581831
Mahata S	581834		
Tabata, S.		Waldron, K.D.	581293
Tait, J.B.	581232	Waldschmidt-Leitz, E. &	F04 (03
Takano, K.	581555	H. Gudernatsch	581683

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Walford, L.A. Wallace, G.M.		Moumer		581386
J.L. Jerron Wallin, O. Watanabe, N. Watanabe, R. Weenink, M.P. Weibezahn, F. Welle-Strand, Wells, J. Wells, M.J. & Wont, A.E.J. Weston, D.B.	H. H. & M.	.V. Rami		581730 581730 581404 581194
Wiborg, K.F. Wieser, W. Wilber, C.G. Wilimovsky, I Wilkins, C.H. Wilsen, T.H. Wise, J.P. Wisner, R.L. Wolf, R.S. Woods, K.R. Worrall, G.A. Wüst, G. Wundsch, Wyttenbach, (g, K.F. 5 r, W. 5 r, C.G. 5 ovsky, N.J. & W.O. Freihofer 5 ns, C.H. 5 n, T.H. 5 J.P. 5 r, R.L. 5 R.S. 5 , K.R. 5 11, G.A. 581255 581288 5 ch, 5			581752 581463 581525 581183 581196 581528 581241 581397 581529 581419 581513 581490
Yonge, C.M. Yoshida, H.O. Yoshida, K. Young, F.N. Yount, J.L.				581485 581686 581566 581709 581322
Zaletaiev, V. Zarnecki, St. Zelikman, E. Zenkevich, L. Zippin, C.	1.		581573	581434 581503 581351 581575 581317
Anonymous	581364 581370 581612	581188 581365 581371 581614 581624 581841	581368 581481 581616	581369 581482 581618

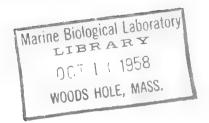


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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Viale delle Terme di Caracalla, Rome, Italy



CURRENT BIBLIOGRAPHY FOR FISHERIES SCIENCE

prepared by
Biology Branch, Fisheries Division

Curr.Bibliogr.Fish.Sci., 1(6)

Rome, August 1958

containing: taxonomic classification (Suppl.1-46), taxonomic indoxes 1(4) and 1(5), geographic indox 1(5), references and author index to, 581843 - 582646

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Errata

Rzoska, J. (1957) 581825 Rop.hydrobiol.Ros.Unit, Sudan, (4):28-30 Survey of work in progress - . Observations on tropical temporary waters

Short summary of knowledge regarding physico-chemical condition of pools near Khartoum, & their planktonic crustacean communities which consist generally of 2 spp. of Anostraca, at least 3 spp. of Conchostraca & 'races' of Triops (Apus). Moina sp. dominates the 'plankton' together with Metacyclops minutus.

GLK: hr

580787 - MF 580796 - M 580882 - F 580896 - M 580965 - F 580967 - M 580968 - M 580969 - F 580978 - F 580985 - F 581043 - M 581097 - MF 581102 - M 581107 - M 581205 - MF 581582 - F 581596 - F 581626 - MF 581633 - MF 581634 - MF 581584 - FAO:hr

580717 - Paramocuim cilia - Paramocium cilia 580754 - Indophycae - Rhodophycae 580931 - Will se daylight - Will sec daylight 581006 - Limnonia - Limnonia

581102 - Mutilus - Mytilus 580730 - Chthalmus - Chthalamus

580804 - Ponogophora - Pogonophora 581107 - Palamii - Pallasii

581359 - grayfish - crayfish 581689 - Chelyosoma - Chelyosoma

The corrections above are for errors found in the issues 1(4) and 1(5) of CBFS. Please make the appropriate amendments.

Addenda

Moulton, J.M. (1957) 580330 Broviora, 80:4 p.
A collection of drawings of fishes ascribed to J.P. Kirtland (1793-1877), in the Library of Bowdoin College

A very brief report announcing the location of historically-significant fishery drawings at Bowdoin College, Me.

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MF

Merkens, J.C. & K.M. 580884

Downing (1957)

Ann.appl.Biol., 45:521-7

The effect of tension of dissolved oxygen on the toxicity of un-ionized ammonia to soveral species of fish

Reports a series of experiments on Salmo gairdnerii, Perca fluviatilis, Rutilus rutilus & Gobio gobio.

FAOssjh

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Explanatory notes

Beginning this month the names of places and organisms in the geographic and taxonomic indexes respectively will be preceded by code numbers or letters. They are derived from the geographic codes circulated as 1(3):Suppl.1 and the four digit taxonomic code to Orders and families attached as a supplement to the present issue. Inclusion of these symbols facilitates our preparation of punched index cards and they can be used by readers of this bibliography to assemble indexes or card sets in ways other than provided by our published indexes — thus, genera can be grouped in major divisions and orders.

We shall be issuing, at a later date, taxonomic codes to genera, and eventually species of aquatic organisms. These are being assembled in the course of routine preparation of this bibliography.



Current Bibliography for Fisheries Science

TAXONOMIC CLASSIFICATION

The following classification is used as a basis for preparing the taxonomic index of the bibliography. The primary divisions (first digit) conveniently separate the main groups of aquatic organisms, and each division is subdivided to roughly the level of Order (second and third digits, separated from the first by a comma) following some authoritative published work, for example, Berg, L.S. (1947) in the case of Division 1, FISHES. Within each order families containing aquatic species are numbered sequentially in parentheses. Lists and code numbers are being prepared for genera within each order, and species within each genus, and the full species code will be published as part of a catalogue of scientific and common names of aquatic organisms.

The numbers ending ,99 and also 5,49 and 5,89 are used to code documents in which more than about ten species are mentioned, although the main species may also be coded. Examples would be papers reporting the results of experimental trawling or listing the organisms found in the stomach of a species of fish, general fisheries statistics. General papers on plankton are normally coded 1,00 : 2,00 : 3,00 : 6,97 : 7,00, and on benthos 2,00 : 3.00 : 6.97.

Indentation of a name by two spaces indicates that the group to which that number refers is a subdivision of the group indicated by the previous number.

Taxonomic Code - Key to primary divisions

(For Alphabetic Index, see pp. 27-46).

ANIMALS

- 1 FISHES (Acrania + Craniata, Agnatha + Craniata,
 Gnathostomata, Series Pisces)
- 2 CRUSTACEANS (Arthropoda, crustacea)
- 3 MOLLUSCS (Invertebrata, mollusca)
- 4 MAMMALS (Vertebrata, mammalia)
- 5 OTHER CHORDATES than fishes and mammals (Amphibia, reptilia, aves, enteropneusta and tunicata)
- 6 OTHER INBERTEBRATES (All phylla except chordata and mollusca, and the class crustacea of the arthropoda)

PLANTS

- 7 ALGAE
- 8 FUNGI (incl. BACTERIA). VIRUSES
- 9 EMBRYOPHYTES (Mosses and Liverworts; Vascular Plants)

1,00	FISHES - GENERAL	1,13	CERATODIFORMES (1) Ceratodidae
1,01	AMPHIOXIFORMES (1) Amphioxidae	1,14	LEPIDOSIRENIFORMES
1,02	PETROMYZONIFORMES (1) Petromyzonidae	- Approximate the second secon	(1) Lepidosirenidae(2) Protopteridae
1,03	MYXINIFORMES (1) Bdellostomatidae	1,15	COELACANTHIFORMES (1) Latimeriidae
	(2) Paramyxinidae (3) Myxinidae	1,16	POLYPTERIFORMES (1) Polypteridae
1,04	HETERODONTIFORMES (1) Heterodontidae	1,17	ACIPENSERIFORMES (1) Acipenseridae
1,05	HEXANCHIFORMES		(2) Polyodontidae
	(1) Chlamydoselachidae(2) Hexanchidae	1,18	AMIIFORIES (1) Amiidae
1,06	LAMINIFORMES	1,19	LEPIDOSTEIFORMES (1) Lepidosteidae
1,07	LAMNOIDEI (1) Orectolobidae (2) Odontaspidae	1,20	CLUPEIFORMES
	(3) Lamnidae	1,21	CLUPEOIDEI
1,08	SCYLIORHINOIDEI (1) Scyliorhinidae (2) Carcharhinidae (3) Sphyrnidae		(1) Elopidae(2) Megalopidae(3) Albulidae(4) Pterottrissidae(5) Clupeidae
1,09	SQUALIFORMES (1) Squalidae (2) Pristiophoridae (3) Squatinidae		(6) Engraulidae(7) Alepocephalidae(8) Dolichopterygidae(9) Macristiidae
1,10	RAJIFORMES	1,22	CHIROCENTROIDEI. CHANOIDEI. PHACTOLAEMOIDEI. CROMERIOIDEI
	 (1) Rhinobatidae (2) Pristidae (3) Discobatidae (4) Rajidae (5) Trygonidae (6) Potamotrygonidae 		(1) Chirocentridae (2) Chanidae (3) Kneriidae (4) Phractolaemidae (5) Cromeriidae
	(7) Myliobatidae (8) Mobulidae	1,23	SALMONOIDEI (1) Salmonidae
1,11	TORPEDINIFORMES (1) Torpedinidae		(2) Thymallidae (3) Plecoglossidae (4) Osmeridae
1,12	CHIMAERIFORMES (1) Chimaeridae (2) Rhinochimaeridae (3) Callorhynchidae		(5) Argentinidae (6) Bathylagidae (7) Microstomidae (8) Xenophthalmichthyidae (9) Salangidae (10) Retropinnidae (11) Haplochitonidae
FAO/58/9,	/6635		.//.

1,24	ESOCOIDEI (1) Dalliidae (2) Umbridae (3) Esocidae	1,35	SACCOPHARYNGIFORMES (1) Saccopharyngidae (2) Eurypharyngidae (3) Monognathidae
1,25	STOMIATOIDEI (1) Gonostomidae (2) Sternoptychidae (3) Stomiatidae	1,36	MORMYRIFORMES (1) Gymnarchidae (2) Mormyridae
	(4) Chauliodonti d ae (5) Astronesthidae	1,37	CYPRINIFORMES
	(6) Melanostomiatidae (7) Idiacanthidae	1,38	CHARACINOIDEI (1) Characinidae (2) Gasteropelecidae
1,26	OPISTHOPROCTOIDEI. GONORHYNCHOIDEI (1) Opisthoproctidae (2) Gonorhynchidae		(3) Xiphostomidae (4) Anostomidae (5) Hemiodontidae (6) Citharinidae
1,27	NOTOPTEROIDEI (1) Hyodontidae (2) Notopteridae	1,39	(1) Rhamphichthyidae(2) Sternarchidae(3) Gymnotidae
1,28	OSTEOGLOSSOIDEI (1) Arapaimidae (2) Osteoglossidae (3) Heterotidae	1,40	(4) Electrophoridae CYPRINOIDEI (1) Catostomidae
1,29	PANTODONTOIDEI ANOTOPTEROIDEI (1) Pantodontidae (2) Anotopteridae		(2) Cyprinidae(3) Gyrinocheilidae(4) Homalopteridae(5) Cobitidae
1,30	BATHYCLUPEIFORMES (1.) Bathyclupeidae	1,41	SILUROIDEI (1) Diplomystidae (2) Ariidae
1,31	GALAXIIFORMES (1) Galaxiidae		(3) Doradidae (4) Auchenipteridae (5) Ageniosidae (6) Plotosidae
1,32	SCOPELIFORMES (1) Synodidae (2) Aulopidae (3) Scopelarchidae (4) Evermannellidae (5) Sudidae (6) Omosudidae (7) Alepisauridae (8) Scopelidae (9) Cetomimidae		(7) Siluridae (8) Bagridae (9) Doiichthyidae (10) Amiuridae (11) Amblycipitidae (12) Akysidae (13) Sisoridae (14) Amphiliidae (15) Chacidae (16) Schilbeidae (17) Saccobranchidae
1,33	ATELEOPIFORMES (1) Ateleopidae	Tageneration of passing of the state of the	(18) Clariidae (19) Olyridae (20) Synodontidae
1,34	GIGANTURIFORMES (1) Giganturidae	magniture de la contraction de	(21) Malapteruridae (22) Pimelodidae (23) Helogenidae

1,41	(24) (25) (26) (27) (28)	Trichomycteridae Bunocephalidae	1,49	MACRURIFORMES (1) Macruridae (2) Macrouroididae GASTEROSTEIFORMES (1) Gasterosteidae (2) Aulorhynchidae
1,42	ANGUILL	IFORMES		(2) Aulorhynchidae (3) Indostomidae
1,43	ANGUI: (1) (2) (3) (4) (5) (6) (7) (8)	LLOIDEI Derichthyidae Anguillidae Simenchelyidae Xenocongridae Myrocongridae Muraenidae Heterenchelyidae	1,51	SYNGNATHIFORMES (1) Aulostomidae (2) Fistulariidae (3) Macrorhamphosidae (4) Centriscidae (5) Solenostomidae (6) Syngnathidae
	(8)	Moringuidae Muraenesocidae	1,52	LAMPRIDIFORMES
	(10) (11) (12)	Neenchelyidae Nettastomidae Nessorhamphidae	1,53	LAMPRIDOIDEI (1) Lampridae
	(13) (14) (15) (16)	<u> </u>	1,54	VELIFEROIDEI (1) Veliferidae (2) Lophotidae
	(17) (18)	Synaphobranchidae	1,55	TRACHYPTEROIDEI (1) Regalecidae (2) Trachypteridae
1,44	NEMIC (1) (2) (3) (4) (5) (6)	HTHYOIDEI Serrivomeridae Nemichthyidae Cyemidae Avocettinopsidae Macrocephenchelyidae Aoteidae	1,56	STYLOPHOROIDEI (1) Stylophoridae CYPRINODONTIFORMES (1) Amblyopsidae
1,45		RIFORMES Halosauridae		(2) Cyprinodontidae (3) Adrianichthyidae (4) Goodeidae (5) Jenynsiidae
1,46	NOTACAN' (1) (2)	THIFORMES Lipogenyidae Notacanthidae	1,58	(6) Anablepidae (7) Poeciliidae PHALLOSTETHIFORMES
1,47	BELONIF	Belonidae	1,59	(1) Neostethidae (2) Phallostethidae PERCOPSIFORMES
	(4)	Scomberesocidae Hemirhamphidae Exocoetidae		(1) Percopsidae (2) Aphredoderidae
1,48	GADIFOR (1) (2) (3) (4)	MES Muraenolepidae Moridae Bregmacerotidae Gadidae	1,60	STEPHANOBERYCIFORMES (1) Stephanoberycidae (2) Rondeletiidae

1,61	BERYCIFORMES	1,70	
1,01	(1) Polymixiidae	(16)	Latilidae
	(2) Berycidae	(17)	Malacanthidae
	(3) Diretmidae	(18)	
	(4) Caristiidae	(19)	Lactariidae
	(4) Caristiidae (5) Trachichthyidae	(20)	
	(6) Ostracoberycidae	(21)	
	(7) Caulolepidae	(22)	
		(23)	
	(8) Korsogasteridae (9) Monocentridae	(24)	Nematistiidae
	(10) Anomalopidae		
	(11) Holocentridae	(25)	
	(12) Gibberichthyidae	(27)	Bramidae
		(28)	
	(13) Melamphaidae		
4 60	ZEIFORMES	(29)	Arripidae Emmelichthyidae
1,62	(1) Zeidae	(30)	Inermiidae
		(31)	
	(2) Grammicolepidae (3) Caproidae	(32)	
	(3) Caproldae	(33)	Nemipteridae Lobotidae
1 62	MUGILIFORMES	(34)	
1,63	MOGILIFORMES	(35)	Liognathidae
4 6 4	SPHYRAENOIDEI	(36)	Pomadasyidae Sciaenidae
1,64	(1) Sphyraenidae	(37)	Lethrinidae
	(1) Sphyraenidae	(39)	
1,65	MUGILOIDEI	(40)	
ر٥و١	(1) Mugilidae	(41)	Mullidae
	(2) Atherinidae	(42)	Psettidae
	(L) MULTITUDO	(43)	Pempheridae
1,66	POLYNEMIFORMES	(44)	
,,,,,	(1) Polynemidae	(45)	
	(1 / 2 02 / 12 012 4 00 0	(46)	Dichistiidae
1,67	OPHIOCEPHALIFORMES	(47)	Cyphosidae
, , ,	(1) Ophiocephalidae	(48)	Girellidae
	. ,	(49)	Ephippidae
1,68	SYMBRANCHIFORMES	(50)	Drepanidae
,	(1) Alabetidae	(51)	Scatophagidae
	(2) Symbranchidae	(52)	Chaetodontidae
	(3) Amphipnoidae	(53)	Enoplosidae
		(54)	Histiopteridae
1,69	PERCIFORMES	(55)	
, -		(56)	Nandidae
1,70	PERCOIDEI	(57)	Polycentri dae
, .	(1) Centropomidae	(58)	Hoplegnathidae
	(2) Serranidae	(59)	Cichlidae
	(3) Glaucosomidae	(60)	Cepolidae
	(4) Theraponidae	(61)	Embiotocidae
	(5) Banjosidae(6) Pseudoplesiopidae	(62)	
	(6) Pseudoplesiopidae	(63)	
	(7) Plesiopidae	(64)	
	(8) Acanthoclinidae	(65)	Scaridae
	(9) Kuhliidae	(66)	Gadopsidae
	(10) Centrarchidae	(67)	Cirrhitidae
	(11) Priacanthidae	(68)	
	(12) Apogonidae	(69)	
	(13) Acropomidae	(70)	
	(14) Percidae (15) Sillaginidae	(71)	TO OLINGA
			1/6) · Suppl 6

1,70		1,74	ACANTHUROIDEI. TRICHIUROIDEI
(72) (73) (74) (75)	Trichodontidae Opisthognathidae Owstoniidae Bathymasteridae Mugiloididae	7 9 7 44	(1) Zanclidae (2) Acanthuridae (3) Gempylidae (4) Trichiuridae
(77) (78)	Chimarrhichthyidae Trachinidae Percophidae	1,75	SCOMBROIDEI (1) Scombridae (2) Cybiidae (3) Histiophoridae (4) Xiphiidae
(87) (88) (89) (90) (91) (92)	Creediidae Limnichthyidae Oxudercidae Leptoscopidae Dactyloscopidae Uranoscopidae Champsodontidae Chiasmodontidae Bovichthyidae Nototheniidae Bathydraconidae	1,76	LUVAROIDEI. TETRAGONUROIDEI. STROMATEOIDEI. ANABANTOIDEI. LUCIOCEPHALOIDEI. KURTOIDEI. (1) Luvaridae (2) Tetragonuridae (3) Stromateidae (4) Nomeidae (5) Anabantidae (6) Luciocephalidae (7) Kurtidae
(94) (95)	Chaenichthyidae Pentapodidae	1,77	GOBIOIDEI (1) Eleotridae (2) Gobiidae
1,71 BLENNIOI (1)	DEI Blenniidae		(3) Periophthalmidae (4) Kraemeriidae
(2)	Anarhichadidae		
(7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20)	Xenocephalidae Congrogadidae Notograptidae Peronedyidae Ophioclinidae Clinidae Xiphisteridae Stichaeidae Pholidae Lumpenidae Microdesmidae Ptilichthyidae Zoarcidae Lycodapodidae Derepodichthyidae Scytalinidae Zaproridae Schindleriidae	1,78	COTTOIDEI (1) Scorpaenidae (2) Triglidae (3) Caracanthidae (4) Aploactidae (5) Synanceidae (6) Pataecidae (7) Hexagrammidae (8) Anoplopomidae (9) Platycephalidae (10) Hoplichthyidae (11) Congiopodidae (12) Icelidae (13) Cottidae (14) Cottocomephoridae (15) Comephoridae (16) Normanichthyidae (17) Cottunculidae (18) Psychrolutidae
1,72 OPHIDIOI (1) (2)	Brotulidae Ophidiidae		(19) Agonidae (20) Cyclopteridae
(3) (4)	Fierasferidae Ammodytidae	1,79	DACTYLOPTERIFORMES (1) Dactylopteridae
1,73 CALLIONY (1) (2) (3)	MOIDEI. SIGANOIDEI Callionymidae Draconettidae Siganidae	1,80	THUNNIFORMES (1) Thunnidae

1,81	PLEURONECTIFORMES
1, 82	PSETTODOIDEI (1) Psettodidae
1,83	PLEURONECTOIDEI (1) Bothidae (2) Pleuronectidae (3) Soleidae (4) Cynoglossidae
1,84	ICOSTEIFORMES (1) Icosteidae
1,85	CHAUDHURIIFORMES (1) Chaudhuriidae
1,86	MASTACEMBELIFORMES (1) Mastacembelidae
1,87	ECHENEIFORMES (1) Echeneidae
1,88	TETRODONTIFORMES
1,89	BALISTOIDEI (1) Triacanthidae (2) Triodontidae (3) Balistidae
1,90	OSTRACIOIDEI. TETRODONTOIDEI (1) Ostraciidae (2) Tetrodontidae (3) Diodontidae
1,91	MOLOIDEI (1) Molidae
1,92	GOBIESOCIFORMES (1) Gobiesocidae
1,93	BATRACHOIDIFORMES (1) Batrachoididae
1,94	LOPHIIFORMES
1,95	LOPHIOIDEI. ANTENNARIOIDEI. (1) Lophiidae (2) Antennariidae (3) Brachionichthyidae (4) Chaunacidae (5) Oncocephalidae
1,96	CERATIOIDEI (1) Melanocetidae (2) Diceratiidae

(3) Himantolophidae
(4) Oneirodidae
(5) Laevoceratiidae
(6) Gigantactidae
(7) Neoceratiidae
(8) Ceratiidae
(9) Caulophrynidae
(10) Photocorynidae
(11) Linophrynidae
PEGASIFORMES
(1) Pegasidae
MISCELLANEOUS

1,96

1,97

1,99

2,00	CRUSTACEANS - GENERAL	2,10	
·	BRANCHIOPODA		(15) Metidae (16) Tachidiidae (17) Monstrillidae
2,02	ANOSTRACA (1) Streptocephalidae (2) Branchinectidae (3) Chirocephalidae		(17) Monstrillidae (18) Doropygidae (19) Caligidae (20) Euryphoridae (21) Pandaridae (22) Dichelesthiidae
2,03	NOTOSTRACA (1) Apodidae		(23) Lernaeidae (24) Chondracanthidae
2,04	CONCHOSTRACA (1) Lynceidae (2) Limnadiidae (3) Leptestheriidae (4) Caenestheriidae		 (25) Lernaeopodidae (26) Sphyriidae (27) Bomolochidae (28) Clausiidae (29) Aetideidae (30) Euchaetidae (31) Stephidae
2,05	(1) Sididae		(32) Tharybidae
	(2) Holopedidae (3) Daphniidae (4) Bosminidae (5) Macrothricidae (6) Chydoridae (7) Polyphemidae	2,11	BRANCHIURA (1) Temoridae
	(5) Macrothricidae	2,12	CIRRIPEDIA
	(7) Polyphemidae (8) Leptodoridae	2,13	THORACICA (1) Scalpellidae (2) Lepadidae (3) Balanidae
•	OSTRACODA		(3) Balanidae (4) Chthamalidae
2,07	PODOCOPA (1) Cytheridae (2) Cypridae (3) Darwinulidae	2,14	ACROTHORACICA (1) Alcippidae
2,08		2,15	APODA
2,00	(1) Cypridinidae (2) Halocypridae	2,16	RHI ZO CE PHALA
2,09	COPEPODA	2,17	MALACOSTRACA
2,10	EUCOPEPODA (1) Calanidae	2,18	NEBALIACEA
	(2) Centropagidae (3) Temoridae (4) Diaptomidae	2,19	ANASPIDACEA. BATHYNELLACEA (1) Bathynellidae
	(5) Pontellidae (6) Cyclopidae (7) Ergasilidae (8) Ectinosomidae	2,20	MYSIDACEA (1) Mysidae (2) Lophogastridae
	(9) Harpacticidae (10) Tisbidae (11) Thalestridae (12) Diosaccidae (13) Canthocamptidae (14) Laophontidae	2,21	CUMACEA (1) Diastylidae (2) Leuconidae (3) Bodotriidae (4) Nannastacidae (5) Pseudocumidae
		<u>.</u>	(6) Lampropidae

2,22	TANAIDACEA (1) Tanaidae	
2,23	(1) Anthuridae (2) Cirolanidae (3) Algidae (4) Cymothoidae (5) Limnoriidae (6) Sphaeromidae (7) Idotheidae (8) Asellidae (9) Janiridae (10) Ligydidae (11) Bopyridae (12) Parastenetriidae	
2,24	AMPHIPODA (1) Hyperiidae (2) Phronimidae (3) Lysianassidae (4) Talitridae (5) Haustoriidae (6) Ampeliscidae (7) Calliopiidae (8) Gammaridae (9) Photidae (10) Amphithoidae (11) Corophiidae (12) Cheluridae (13) Caprellidae (14) Amphilochidae (15) Cyamidae	3
. 2,25	STOMATOPODA (1) Squillidae	
2,26	EUPHAUSIACEA (1) Euphausiidae (2) Bentheuphausiidae	
2,27	DECAPODA	
2,28	NATANTIA	
	(1) Penaeidae (2) Cragonidae (3) Palaemonidae (4) Pandalidae (5) Hippolytidae (6) Crangonidae (7) Sergestidae (8) Pasiphaeidae (9) Atyidae (10) Hoplophoridae (11) Alpheidae (12) Processidae	

REPTANTIA (1) Palinuridae (2) Homaridae (3) Astacidae 4) Callianassidae 5) Paguridae 6) Hippidae Leucosiidae Inachidae (9) Cancridae 10) Xanthidae 11) Portunidae 12) Pinnotheridae 13) Grapsidae 14) Ocypodidae 15) Scyllaridae 16) Potamobiidae 17) Axiidae 18) Laomediidae 19) Galatheidae 20) Lithodidae 21) Majidae 22) Corystidae (23) Atelecyclidae (24) Porcellanidae

2,29

3,00	MOLLUSCS - GENERAL	3,	10 TAENIOGLOSSA	
3,01	AMPHINEURA		(1) Waticilae (2) Capulidae	
3,02	APLACOPHORA (1) Neomeniidae (2) Proneomeniidae (3) Chaetodermatidae		(3) Littorinidae (4) Rissoldae (5) Amnicolidae (6) Skoneidae (7) Valvatidae	
3,03	POLYPLACOPHORA (1) Lepidopleuridae (2) Ischnochitonidae (3) Mopaliidae (4) Acanthochitidae		(8) Viviparidae (9) Ampullariidae (10) Cerithiidae (11) Cerithiopsidae (12) Triphoridae (13) Pleuroceratida	
3,04	SCAPHOPODA (1) Dentaliidae (2) Siphonodentaliidae		(14) Turritellidae (15) Vernetidae (16) Stronbidae (17) Cypraeidae (18) Doliidae	
3,05	GASTROPODA		(19) Cassididae	
3,06	PROSOBRANCHIATA		(20) Cymatiidae (21) Carinariidae	
3,((1) Acmaeidae (2) Fissurellidae		(22) Atlantidae (23) Hydrobiidae (24) Struchiolariid	ae
	(3) Haliotidae(4) Trochidae(5) Turbinidae(6) Neritidae(7) Helicinidae	3,11	OPISTHORRANCHIATA (1) Acteonidae (2) Acteocinidae (3) Scaphandridae (4) Akeratidae	
3,0	08 PECTINIBRANCHIATA	Common place in the common party.	(5) Pullidae (6) Philinidae	
	3,09 PTINOGLOSSA, GYMNOGLOSSA RACHIGLOSSA TOXOGLOSSA (1) Janthinidae (2) Epitoniidae (3) Melanellidae (4) Pyramidellidae (5) Muricidae (6) Columbellidae (7) Nassidae (8) Buccinidae (9) Turbinellidae (10) Mitridae (11) Olividae		(7) Aglajidae (8) Tethyidae (9) Spiratellidae (10) Cavolinidae (11) Clionidae (12) Scyllaeidae (13) Dendronotidae (14) Polyceratidae (15) Dorididae (16) Acclididae (17) Dotonidae (19) Hormacidae (19) Elysiidae (20) Limapontiidae (21) Phyllirhoidae	
	(12) Terebridae (13) Conidae	3,12	PULMONATA	
	(14) Turridae (15) Cancellariidae (16) Stiliferidae (17) Paedophoropodidae (18) Galeodidae	3,13	BASOMIA FOPHORA (1) Ellobiidae (2) Lymnaeidae (3) Planorbidae (4) Ancylidae (5) Physidae	

3,14 STYLOMMATOPHORA (1) Onchidiidae (2) Urocoptidae PELECYPODA (Lamellibranchiata) 3,15 3,16 PRIONODESMACEA (1) Nuculidae 2) Nuculanidae 3) Solemyacidae 4) Arcidae 5) Unionidae 6) Pteriidae Ostreidae 8) Pectinidae Anomiidae 10) Mytilidae (11) Dreissensiidae TELEODESMACEA 3,17 (1) Astartidae 2) Carditidae 3) Crassatellitidae 4) Pleurophoridae 5) Cyrenidae 6) Erveinidae Erycinidae Kellyellidae Lucinidae 9) Cardiidae 10) Mactridae 11) Veneridae 12) Petricolidae 13) Semelidae 14) Tellinidae 15) Donacidae 16) Solenidae 17) Myacidae 18) Saxicavidae 19) Pholadidae 20) Teredinidae (21) Corbiculidae ANOMALODESMACEA 3,18 (1) Laternulidae

(2) Lyonsiidae (3) Pandoridae

(1) Nautilidae

(1) Spirulidae(2) Sepiidae

CEPHALOPODA

TETRABRANCHIA

DIBRANCHIA

Cuspidariidae

3,21
(3) Sepiolidae
(4) Loliginidae
(5) Ommastrephidae
(6) Onychoteuthidae
(7) Cranchiidae
(8) Argonautidae
(9) Octopodidae

3,22 MONOPLACOPHORA (1) Tryblidiidae

3,99 MISCELLANEOUS

3,19

3,20

3,21

4,00	MAMMALS - GENERAL
4,01	MONOTREMATA
4,02	MARSUPIALIA (1) Didelphyidae
4,03	INSECTIVORA (1) Talpidae (2) Soricidae
4,04	CARNIVORA
4,05	FISSIPEDIA (1) Mustelidae (2) Ursidae
4,06	PINNIPEDIA (1) Otariidae (2) Odobaenidae (3) Phocidae
4,07	PERISSODACTYLA
4,08	ARTIODACTYLA
4,09	SUINA (1) Hippopotamidae
4,10	TYLOPODÀ
4,11	PECORA
4,12	HYRACOIDEA
4,13	PROBOSIDAE
4,14	SIRENIA (1) Dugongidae (2) Trichechidae
4,15	RODENTIA
4,16	SIMPLICIDENTATA (1) Castoridae and Aplodontidae (2) Muridae
4,17	DUPLICIDENTATA
4,18	CHIROPTERA
4,19	MICROCHIROPTERA
4,20	MEGACHIROPTERA

4,21 CETACEA 4,22 ODONTOCETI (1) Platanistidae and Iniidae (2) Ziphiidae (3) Physeteridae (4) Delphinidae and Delphinapteridae MYSTACOCETI 4,23 (1) Rhachianectidae(2) Balaenopteridae(3) Balaenidae 4,24 EDENTATA 4,25 LORICATA 4,26 PILOSA 4,27 TUBULIDENTATA 4,28 PHOLIDATA 4,29 PRIMATES 4,30 LEMUROIDEA 4,31 TARSIOIDEA 4,32 ANTHROPOIDEA 4,97 'AQUATIC MAMMALS' 4,99 MISCELLANEOUS

5,00 AMPHIBIA	5,31 (9) Chelydidae (10) Carettochelyidae (11) Trionychidae
5,01 STEGOCEPHALIA	(11) Trionychidae
5,02 GYMNOPHIONA	5,32 RHYNCHOCEPHALIA
	5,33 SQUAMATA
5,03 CAUDATA 5,04 PROTEIDA (1) Proteidae	5,34 SAURIA (1) Varanidae (2) Anniellidae
5,05 MUTABILIA (1) Crytobranchidae (2) Ambystomidae (3) Salamandridae	5,35 SERPENTES (1) Hydrophidae (2) Colubridae
(4) Amphiumidae (5) Plethodontidae	5,36 LORICATA (1) Crocodylidae
5,06 MEANTES	5,49 Miscellaneous REPTILIA
(1) Sirenidae	5,50 AVES
5,07 SALIENTIA	5,51 PALAEOGNATHAE
5,08 AMPHICOELA (1) Ascaphidae	5,52 STRUTHIONIFORMES
5,09 OPISTHOCOELA	5,53 RHEIFORMES
(1) Discoglossidae (2) Pipidae	5,54 CASUARIIFORMES
5,10 ANOMOCOELA (1) Pelobatidae	5,55 APTERYGIFORMES
	5,56 TINAMIFORMES
(1) Bufonidae	5,57 NEOGNATHAE
(2) Hylidae (3) Brachycephalidae	5,58 SPHENISCIFORMES
5,12 DIPLASIOCOELA	5,59 GAVIIFORMES
(1) Ranidae	5,60 COLYMBIFORMES
5,29 Miscellaneous AMPHIBIA	5,61 PROCELLARIIFORMES
5,30 REPTILIA	(1) Diomedeidae (2) Procellaridae
5,31 CHELONIA (1) Dermochelidae (2) Chelydridae (3) Dermatemyidae (4) Kinosternidae (5) Platysternidae	5,62 PELECANIFORMES (1) Pelecanidae (2) Phalacrocoracidae (3) Sulidae
(6) Testudinidae (7) Cheloniidae (8) Pelomedusidae	5,63 CICONIIFORMES (1) Ardeidae (2) Phoenicopteridae

5,64	ANSERIFORMES (1) Anatidae (2) Palamedidae	5,7	(11) Troglodytidae (12) Hunidae
5,65	FALCONIFORMES		(13) Turdidae (14) Regulidae
5,66	GALLIFORMES (1) Tetraonidac (2) Peridicidac (3) Phasianidac (4) Meleagridae (5) Opisthocomidae		(15) Motacillidae (16) Bombycillidae (17) Ptilogonatidae (18) Laniidae (19) Sturnidae (20) Vireonidae (21) Mniotiltidae (22) Icteridae
5,67	GRUIFORMES (1) Gruidae (2) Rallidae		(23) Thraupidae (24) Fringillidae
5,68	CHARADRIIFORMES	5,87	AQUATIC BIRDS
<i>)</i> , 00	(1) Laridae (2) Alcidae	5,89	MISCELLANEOUS BIRDS
5,69	COLUMBIFORMES (1) Columbidae	5,90	INVERTEBRATE CHORDATA considered together may include 1,01
5,70	CUCULIFORMES	5,91	ENTEROPNEUSTA
5,71	PSITTACIFORMES	5, 92	
5,72	STRIGIFORMES		(1) Ptychoderidae (2) Harrimaniidae
5,73	CAPRIMULGIFORMES	5,93	CEPHALODISCIDA
5,74	MICROPODIFORMES (1) Micropodidae (2) Trochilidae	5 ,9 4	LARVACEA
5,75	COLIIFORMES		(1) Appendiculariidae (2) Kowalevskiidae
5,76	TROGONIFORMES	5,96	ASCIDIACEA (1) Synoicidae
5,77	CORACIIFORMES		(2) Didemnidae (3) Polycitoridae
5,78	PICIFORMES (1) Picidae		(4) Perophoridae (5) Ascidiidae (6) Rhodosomatidae
5,79	PASSERIFORMES (1) Cotingidae (2) Tyrannidae (3) Alaudidae (4) Hirundinidae (5) Corvidae (6) Paridae		(7) Botryllidae (8) Styelidae (9) Pyuridae (10) Molgulidae (11) Pyrosomatidae
		5,97	THALIACEA
	(7) Sittidae (8) Certhiidae (9) Chamaeidae (10) Cinclidae	5,98	CHORDATA, general. $\sqrt{\text{May}}$ include Division 1 and $4\sqrt{}$
	(10) othertrase	5,99	MISCELLANEOUS

1(6):Suppl.15

OTHER INVERTEBRATES	6,19 ANTHOZOA
5,00 PROTOZOA	(1) Coralliidae (2) Stylatulidae
	(3) Sagartiidae
6,01 MASTIGOPHORA, ZOOMASTIGINA /For Phytomastigina see code for plants/	6,20 CTENOPHORA
(1) Trypanosomidae	6,21 TENTACULATA (1) Pleurobrachiidae
6,02 SARCODINA	6,22 NUDA
6,03 RHIZOPODA	(1) Beroidae
6,04 ACTINOPODA	6,23 PLATYHELFIINTHES
6,05 SPOROZOA	6,24 TURBELLARIA (1) Planariidae
6,06 TELOSPORIDIA (1) Monocystidae	6,25 TREMATODES
6,07 CNIDOSPORIDIA	6,26 MONOGENA
6,08 ACNIDOSPORIDIA	(1) Gryodactylidae (2) Monocotylidae
6,09 CILIATA	(3) Tristomidae (4) Octocotylidae (5) Microcotylidae
6,10 PROTOCILIATA	(6) Gastrocotylidae (7) Diclidophoridae
6,11 EUCILIATA (1) Vorticellidae	6,27 DIGENA
6,12 SUCTORIA	(1) Bucephalidae (2) Strigeidae
5,13 PORIFERA	(3) Troglotrematidae (4) Corgoderidae (5) Heterophyidae
6,14 CALCAREA	(6) Opisthorchiidae (7) Hemiuridae
6,15 NONCALCAREA (1) Spongiidae (2) Clionidae	6,28 CESTOIDEA
(3) Haploscleridae (4) Axinellidae	6,29 CESTODARIA (1) Amphilinidae (2) Gyrocotylidae
6,16 COELENTERATA	
6,17 HYDROZOA (1) Sertulariidae (2) Bougainvillidae (3) Hydridae (4) Claridae (5) Petasidae (6) Velellidae	6,30 CESTODES (1) Onchobothriidae (2) Proteocephalidae (3) Dibothriorhynchiidae (4) Floricepitidae (5) Ptychobothriidae (6) Cyathocephalidae (7) Diphyllobothriidae
6,18 SCYPHOZOA (1) Ulmaridae	6,31 NEMERTEA
	6,32 NEMATHELMINTHES

6,33 NEMATODA (1) Camallanidae	6,52 GEPHYREA			
6,34 MEMATOMORPHA	6,53 HIRUDINEA			
	6,54 ARTHROPODA			
6,35 ACANTHOCEPHALA (1) Echinorhynchidae (2) Neoechinorhynchidae	6,55 ARACHNOIDEA			
	6,56 XIPHOSURA			
6,36 TROCHELMINTHES	6,57 ARACHNIDA			
6,37 ROTATORIA (1) Synchaetidae (2) Conochilidae (3) Asplanchnidae	6,58 SCORPIONIDA PALPIGRADI PEDIPALPI			
6,38 GASTROTRICHA	6,59 SOLPUGIDA, PHALANGIIDA			
	6,60 CHELONETHIDA			
6,39 KINORHYNCHA 6,40 BRYOZOA	6,61 ARANEAE (1) Argiopidae			
6,41 ENTOPROCTA	6,62 ACARINA			
6,42 ECTOPROCTA	(1) Hydrachnidae (2) Halacaridae			
(1) Hippoporinidae	6,63 LINGUATULIDA, TARDIGRADA,			
6,43 BRACHIOPODA	PYCNOGONIDA			
6,44 PHORONIDEA	6,64 ONYCHOPHORA			
6,45 CHAETOGNATHA	6,65 MYRIAPODA			
6,46 ANWELIDA	6,66 INSECTA			
6,47 ARCHIANNELIDA	6,67 APTERYGOTA (THYSANURA, PROTURA, COLLEMBOLA)			
6,48 POLYCHAETA	6,68 PTERYGOTA			
6,49 POLYCHAETA ERRANTIA				
(1) Hesionidae (2) Nephthydidae	6,69 ORTHOPTERA			
(3) Aphroditidae (4) Syllidae	6,70 DERTAPTERA			
	6,7.1 PLECOPTERA			
6,50 POLYCHAETA SEDENTARIA (1) Ariciidae (2) Cirratulidae	6,72 ISOPTERA			
(3) Terebollidae	6,73 ETBIOPTERA			
(5) Ammocharidae	6,74 PSOCOPTERA			
(6) Spionidae (7) Maldanidae	6,75 ANOPLURA			
6,51 OLIGOCHAETA (1) Tubificidae (2) Enchytraidae	6,76 EPHEMEROPTERA			

6	,77	ODONATA (1) Coenagridae (2) Libellulidae
6	,78	THYSANOPTERA
6	,79	HEMIPTERA
6	, 80	NEUROPTERA
6	, 81	MECOPTERA
6	,82	TRICHOPTERA
6	,83	LEPIDOPTERA
6	,84	COLEOPTERA (1) Hydrophilidae (2) Dytiscidae
6	,85	STREPSIPTERA
6	, 86	HYNENOPTERA
6	,87	DIPTERA (1) Culicidae (2) Tendipedidae
6	,88	APHANIPTERA
6,89	ECHIN	ODERMATA
6,90	CRI	NOIDEA
6,91	AST	EROIDEA (1) Astropectinidae
6,92	OPH	IUROIDEA (1) Amphiuridae (2) Ophiocomidae (3) Ophiolepididae
6,93	ECH	INOIDEA (1) Centrechinidae (2) Strongylocentrotidae (3) Scutellidae (4) Echinidae (5) Arbaciidae
6,94	HOL	OTHURIOIDEA
6,97		IC INVERTEBRATES
6,98	INVER	TEBRATES, general. May
6,99	MISCE	LLANEOUS INVERTEBRATES

7,00 AI	GAE - GENERAL	7 ,15	EUCONJUGATAE (1) Mesotaeniaceae
7,01 CH	ILOROPHYCEAE		(2) Zygnomaceae (3) Mougeotiaceae
7,02	VOLVOCALES		(4) Gonatozygaceae
7,03	CHLAMYDOMONADINEAE (1) Chlamydomonadaceae (2) Sphacrellaceae	7,16	DESMIDIOIDEAR (1) Desmidiaceae
	(3) Polyblepharidaceae (4) Placotaceae	7,17	SIPHONALES (1) Protosiphonaceae (2) Caulerpaceae
7,04	TETRASPORINEAE (1) Tetrasporaceae (2) Palmellaceae		(3) Derbesiaceae (4) Dasycladaceae (5) Codiaceae (6) Valoniaceae
7,05	CHLORODENDRINEAE (1) Chlorodendraceae		(7) Chaetosiphonaceae (8) Phyllosiphonaceae (9) Vaucheriaceae
7,06	CHLOROCOCCALES		
	(1) Chlorococcaceae (2) Eremosphaeraceae (3) Chlorellaceae	7,18	CHARALES (1) Characeae
	(4) Oocystaceae (5) Selenastraceae	7,21 X	ANTHOPHYCEAE
	(6) Dictyosphaeriaceae (7) Hydrodictyaceae (8) Coelastraceae	7,22	HETEROCHLORIDALES (1) Heterochloridaceae (2) Heterocapsaceae (3) Mischococcaceae
7,07	ULOTRICHALES		(4) Heterorhizidaceae
7,08	ULOTRICHINEAE (1) Ulotrichaceae (2) Microsporaceae (3) Cylindrocapsaceae (4) Ulvaceae	7,23	HETEROCOCCALES (1) Halosphaeraceae (2) Myxochloridaceae (3) Chlorobotrydaceae (4) Chlorotheciaceae
7,09	PRASIOLINEAE		(5) Ophiocytiaceae
1,909	(1) Prasiolaceae	7,24	HETEROTRICHALES (1) Tribonemaceae
7,10	SPHAEROPLEINEAE (1) Sphaeropleaceae		(2) Heterocloniaceae
7,11	CLADOPHORALES	7,25	HETEROSIPHONALES (1) Botrydiaceae
7,12	CHAETOPHORALES (1) Chaetophoraceae	7,31	HRYSOPHYCEAE
	(2) Trentepohliaceae (3) Coleochaetaceae (4) Chaetosphaeridiaceae	7,32	CHRYSOMONADALES (1) Chromulinaceae (2) Oicomonadaceae (3) Mallomonadaceae
7,13	OEDOGONIALES (1) Oedogoniaceae		(4) Cyrtophoraceae (5) Isochrysidaceae (6) Coccolithophoridaceae
7,14	CONJUGALES		(7) Synuraceae (8) Ochromonadaceae

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7,32		7,64 DINOPHYSIALES	
1 7 -	(9) Monadaceae	(1) Dinophysiaceae	
	(10) Lepochromonadaceae	(2) Amphisoleniaceae	
	(11) Prymnesiaceae		
	(12) Rhizochrysidaceae	7,65 DINOFLACELLATA	
	(13) Lagyniaceae		
	(14) Chrysocapsaceae	7,66 GYMNODINIOIDEAE	
	(15) Naogeliellaceae (16) Hydruraceae	(1) Pronoctilucaceae	
	(16) Hydruraceae	(2) Gymnodiniaceae (3) Polykrikaceae	
7,33	CHRYSOSPHAERALES	(4) Noctilucaceae	
, 1900	(1) Chrysosphaeraceae	(5) Warnowiaceae	
	(2) Chrysostomataceae	(6) Blastodiniaceae	
	(3) Pterospermaceae		
	, , , , , , , , , , , , , , , , , , , ,	7 67 AMPHILOTHALOIDEAE	
7,34	CHRYSOTRICHALES	KOLKWITZIELLOIDEAE	
	(1) Nematochrysidaceae	PERIDINIOIDEAE	
	(2) Phaeothamnionaceae	(1) Amphilothaliaceae	
	(3) Thallochrysidaceae	(2) Kolkwitzielkaceae	
7 44	DACTI ADTODINOMAT	(3) Glenodiniaceae	
7,41	BACILLARIOPHYCEAE	(4) Protoceratiaceae	
7,42	CENTRALES	(5) Gonyaulaceae (6) Peridiniaceae	
1944	(1) Discoideae	(7) Ceratiaceae	
	(2) Solenoideae	(8) Goniodomaceae	
()	(3) Biddulphioideae	(9) Ceratocoryaceae	
	(4) Rutilarioideae	(10) Podolampaceae	
	1.7	(11) Dinocapsaceae	
7,43	PENNALES	(12) Rhizodinaceae	
	(1) Fragilarioideae		
,	(2) Eunotioideae	7,68 DINOCOCCALES. DINOTRICHAL	ES
	(3) Achnanthoideae	(1) Dinococcaceae	
, '	(4) Naviculoideac	(2) Dinotrichaceae	
£" "	(5) Epithemioideae (6) Nitzschioideae	(3) Dinocloniaceae	
` ` ,	(7) Surirelloideae	7,69 CHLOROMONADINEAE	
	(1) purification deale	1,009 CIIIOROMONADINIAI	
7,51	CRYPTOPHYCEAE	7,70 EUGLENINEAE	
(,) 2.		(1) Euglenaceae	
1,7,52	CRYPTOMONADALES	(2) Astasiaceae	
.1	(1) Cryptomonadaceae	(3) Peranemaceae	
	(2) Nephroselmidaceae		
	(3) Phaeocapsaceae	7,71 PHAEOPHYCEAE	
7 (10)	COTTANA CO O CA A T TIC		
7,53	CRYPTOCOCCALES	7,72 ECTOCARPALES	
	(1) Cryptococcaceae	(1) Ectocarpaceae	
7,61	DIMOPHYCEAE	(2) Myrionemataceae (3) Elachistaceae	
1901	D13/01 111 013/115	(4) Leathesiaceae	
7,62	DESMONADALES	(5) Mesoglocaceae	
,, 9	(1) Desmonadaceae	(6) Acrotrichaceae	
	` '	(7) Spermatochnaceae	
7,63	THECATALES	(8) Splachnidiaceae	
	(1) Prorocentraceae	(9) Punctariaceae	
		(10) Asperococcaceae	
		(11) Encoeliaceae	
		(12) Dictyosiphonaceae	

7,73	TILOPTERIDALES	7,86	
		900	(4) Grateloupiaceae (5) Dumontiaceae
7,74	CUTLERIALES	,	(5) Dumontiaceae (6) Cruoriaceae
7,75	SPOROCHNALES		(7) Rhizophyllidaceae (8) Squamariaceae
7,76	DESMARESTIALES		(9) Corallinaceae (10) Choreocolaceae
7,77	LAMINARIALES (1) Chordaceae (2) Laminariaceae (3) Lessoniaceae (4) Alariaceae	7,87	(11) Gloiopeltidaceae GIGARTINALES (1) Calosiphoniaceae (2) Nemastomaceae
7,78	SPHACELARIALES (1) Sphacelariaceae (2) Stypocaulaceae (3) Cladostephaceae (4) Choristocarpaceae		(3) Sebdeniaceae (4) Furcellariaceae (5) Solieriaceae (6) Rissoellaceae (7) Rhabdoniaceae (8) Rhodophyllidaceae
7,79	DICTYOTALES		(9) Hypneaceae (10) Plocamiaceae (11) Sphaerococcaceae
7,80	FUCALES (1) Fucaceae (2) Himanthaliaceae (3) Cystoseiraceae (4) Sargassaceae (5) Hormosiraceae		(12) Gracilariaceae (13) Mychodeaceae (14) Acrotylaceae (15) Phyllophoraceae (16) Gigartinaceae
- 0.	(6) Durvilleaceae (7) Ascoseiraceae	7,88	RHODYMENIALES (1) Champiaceae (2) Rhodymeniaceae
7,81	RHODOPHYCEAE	7,89	CERAMIALES
7,82	BANGIALES (1) Bangiaceae (2) Porphyridiaceae		(1) Ceramiaceae(2) Delesseriaceae(3) Rhodomelaceae(4) Dasyaceae
7,83	FLORIDEAE (incl. 7,84/7,89)	7,91	МУХОРНУСЕДЕ
7,84	NETALIONALES (1) Acrochaetiaceae (2) Batrachospermaceae (3) Lemaneaceae (4) Naccariaceae (5) Bonnemaisoniaceae	7,92	CHROOCOCCALES (1) Chroococcaceae (2) Cyanochloridaceae (3) Entophysalidaceae
7,85	(6) Thoreaceae (7) Helminthocladiaceae (8) Chaetangiaceae GELIDIALES	7,93	CHAMAESIPHONALES (1) Dermocarpaceae (2) Chamaesiphonaceae (3) Endonemataceae (4) Siphononemataceae
	(1) Gelidiaceae	7,94	PLEUROCAPSALES
7,86	CRYPTONEMIALES (1) Gloeosiphoniaceae (2) Endocladiaceae (3) Callymeniaceae		(1) Pleurocapsaceae (2) Hyellaceae

7,95 NOSTOCALES

- (1) Oscillatoriaceae
- (2) Nostocaceae (3) Microchaetaceae
- 4) Rivulariaceae
- (5) Scytonemataceae(6) Brachytrichieae

7,96 STIGONEMATALES

- (1) Pulvinulariaceae (2) Capsosiraceae
- (3) Nostochopsidaceae (4) Loefgreniaceae (5) Stigonemataceae

- 7,99 MISCELLANEOUS

The state of the s	The same of the sa	
Note: - Subdivisions with aquatic forms		
8, FUNGI (incl. BACTERIA). VIRUSES	8,53	TAPHRINALES
8,00 FUNGI - GENERAL	8,54	ASPERGILLALES *
8,01 BACTERIA *	8,55	MYRIANGIALES (1) Pseudosphaeriaceae
8,11 ACTINOMYCETALES	8,56	PERISPORIALES
8,21 MYXOMYCETES	8,57	LABOULBENIALES
8,22 ACRASIALES	8,58	
8,23 LABYRINTHULALES *	8,59	
8,24 PLASMODIOPHORALES	8,60	HYPOCREALES
8,25 PHYSARALES		33.
8,26 STEMONITALES	8,61	
8,27 LICEALES	8,62	HEMISPHAERIALES
8,28 TRICHIALES	8,63	HELOTIALES
8,31 EUNYCOPHYTA	8,64	PHACIDIALES /
8,32 PHYCOMYCETES	8,65	PEZIZALES
8,33 CHYTRIDIALES *	8,66	HELVELLALES
8,34 LAGENIDIALES *	8,67	TUBERALES
8,35 BLASTOCLADIALES *	8,70	ASCOLICHENES
8,36 MONOBLEPHARIDALES *	8,71	BASIDIOMYCETES
,	8,72	USTILAGINALES
	8,73	UREDINALES
8,38 LEPTOMITALES *	8,74	AURI CULARIALES
8,39 PYTHIALES*	8,75	TREMELLALES
8,40 PERONOSPORALES	8,76	DACRYOMYCETALES
8,41 MUCORALES	8,77	AGARICALES
8,42 ENTOMOPHTHORALES *	8,78	HYMENOGASTRALES
8,45 ENDOGONALES	8,79	PODAXALES
8,47 ECCRINALES *	8.80	PHALLALES
8,51 ASCOMYCETES	8.81	. 1
8,52 SACCHAROMYCETALES		LYCOPERDALES
	8.82	SCLERODERMATALES

- 8,83 NIDULARIALES
- 8,91 "FUNGI IMPERFECTI"
 - 8,92 PHOMALES
 - 8,93 MELANCONIALES
 - 8,94 MONILIALES
 - 8,95 MYCELIA STERILIA
- 8,96 VIRUSES
- 8,97 "AQUATIC FUNGI; FUNGI AND VIRUSES PARASITIC IN AQUATIC ORGANISMS"
- 8,99 MISCELLANEOUS

				•		
	9,00	EMBRY	OPHYTES - GENERAL	9,32	CYCADALES	
9,01 BRYOPHYTA 9,02 HEPATICAE			ATYH	9,33	GINKGOALES	
			PATICAE	9,34	CONIFERALES	
		9,03	MARCHANTIALES (1) Ricciaceae	9,35	GNETALES	
		0.04		9,41 ANGIOSPERMAE		
		9,04	JUGERMANNIALES (1) Anacrogynaceae (2) Lepidoziaceae	9,42	MONOCOTYLEDONEAE	
		9,05	ANTHOCEROTALES	9,43	HELOBIAE (1) Alismataceae	
	9,00	·			(2) Butomaceae (3) Hydrocharitaceae	
	790				(4) Scheuchzeriaceae	
		9,07	SPHAGNALES (1) Sphagnaceae		(5) Aponogetonaceae(6) Potamogetonaceae(7) Najadaceae	
		9,08	ANDREAZALES	9,44	LILIIFLORAE	
		9,09	BRYALES (1) Fontinalaceae) 7944	(1) Pontederiaceae	
	9,11	PWEBI	ДОРНҮТА	9,45	ENANTIOBLASTAE	
	<i>)</i>		PSILOTALES	9,46	CYPERALES	
					(1) Cyperaceae	
		9,14	LYCOPODIALES	9,47	GLUMIFLORAE (1) Gramineae	
		9,15	SELAGINELLALES	9,48	SCITAMINEAE	
		9,16	ISOETALES (1) Isoetaceae			
				9,49		
		9,18	EQUISETALES (1) Equisetaceae	9,50	SPADICIFLORAE (1) Lemnaceae	
	9,2	21 FILICINAE		9,51	PANDANALES (1) Thyphaceae	
		9,22	OPHIOGLOSSALES	9,52	DICOTYLEDONEAE	
		9,23	MARATTIALES			
		9,24	FILICALES	9,53	VERTICILLATAE	
		9,25	HYDROPTERIDALES	9,54	FAGALES	
			(1) Marsiliaceae(2) Salvíniaceae	9,55	MYRICALES	
			(3) Azollaceae	9,56	BALANOPSIDALES	
	9,30	SPERI	MATOPHYTA	9,57	LEITNERIALES	
	9,3	1 GY	LINOSPERMAE	9,58	JUGLANDALES	

9,59	GARRYALES
9,60	SALICALES
9,61	BATIDALES
9,62	URTICALES
9,63	PIPERALES
9,64	PROTEALES
9,65	SANTALALES
9,66	POLYGONALES
9,67	CENTROSPERMAE
9 ,6 8	TRICOCCAE
9,69	HAMAMELIDALES
9,70	POLYCARPICAE (1) Ranunculaceae (2) Nymphaeaceae
9,71	RHOEADALES (1) Cruciferae
9,72	PARIETALES
9,73	GUTTIFERALES
9 74	ROSALES
9,75	MYRTALES (1) Halorrhagidaceae
9,76	COLUMNIFERAE
9,77	GRUINALES
9,78	TEREBINTHALES
9,79	CELASTRALES
9,80	RHAMNALES
9.81	UMBELLIFLORAE (1) Umbelliferae
9,82	PLUMBAGINALES
9,83	PRIMULALES (1) Primulaceae

	9,84	BICORNES
	9,85	DIOSPYRALES
	9,86	TUBIFLORAE (1) Lentibulariaceae (2) Labiatae (3) Plantaginaceae
	9,87	CONTORTAE
	9,88	LIGUSTRALES
	9,89	RUBIALES
	9.90	CUCURBITALES
	9.91	SYNANDRAE (1) Compositae (2) Lobeliaceae
9,97	AQUAT	IC EMBRYOPHYTES
9,99	MISCE	LLANEOUS

Taxonomic Code - Alphabetic Index

Abyssocottini ACANTHOCEPHALA	1,78(14) 6,35	Alepocephalidae ALGAE, GEN.	1,21 (7) 7,00
Acanthochitidae	3,03 (4)	ALGAE, MISC.	7,99
Acanthoclinidae	1,70 (8)		
(Acanthopterygii,		Algidae	2,23 (3)
Percomorphi)	1,69	Alismataceae	9,43 (1)
Acanthuridae	1,74 (2)	(Allotriognathi)	1,52
ACANTHUROIDEI	1,74	Alopiini	1,07 (3)
ACARINA	6,62	Alpheidae	2,28(11)
(Achiridae)	1,83 (3)	(Ambassidae)	1,70 (1)
Achirini	1,83 (3)	(Amblycepidae)	1,41(11)
Achnanthoideae	7,43 (3)	Amblycipitidae	1,41(11)
(Acinaceidae)	1,74 (3) 1,17 (1)	Amblyopsidae	1,57 (1) 1,57
Acipenseridae ACIPENSERIFORMES	1,17	AMBLYOPSOIDEI Ambystomidae	5,05 (2)
(Acipenserini)	1,17 (1)	Amidae	1,18 (1)
Acmaeidae	3,07 (1)	AMIIFORMES	1,18
ACNIDOSPORIDIA	6,08	Amiuridae	1,41(10)
ACRASIALES	8,22	Ammocharidae	6,50 (5)
Acrochaetiaceae	7,84 (1)	Ammodytidae	1,72 (4)
(Acronuridae)	1,74 (2)	AMMODYTOIDEI	1,72
Acropomidae	1,70(13)	Amnicolidae	3,10 (5)
ACROTHORACICA	2,14	Ampeliscidae	2,24 (6)
(Acrotidae, Jordan)	1,84 (1)	(Amphacanthi)	1,73
Acrotrichaceae	7,72 (6)	AMPHIBIANS, Misc.	5,29
Acrotylaceae	7,87(14)	AMPHIBIANS, Gen.	5,00
Acteocinidae	3,11 (2) 3,11 (1)		
Acteonidae ACTINOMYCETALES	8,11	AMPHIBODA	2,24
ACTINOPODA	6,04	AMPHICOELA	5,08
(Adinida - Dinoflagellida)		Amphiliidae	1,41(14)
Adrianichthyidae	1,57 (3)	Amphilinidae	6,29 (1)
Aeolididae	3,11(16)	Amphilochidae	2,24(14)
Aetideidae	2,10(29)	Amphilothaliaceae	7,67 (1)
AGARICALES	8,77	AMPHILOTHALOIDEAE	7,67
Ageniosidae	1,41 (5)	AMPHINEURA	3,01
Aglajidae	3,11 (7)	Amphioxidae	1,01 (1)
Agonidae	1,78(19)	AMPHIOXIFORMES	1,01
(Agridae) (Agriopidae)	1,41(28) 1,78(11)	Amphipnoidae	1,68 (1) 2,24
Akeratidae	3,11 (4)	AMPHIPODA (Amphiprionidae)	1,70(62)
Akysidae	1,41(12)	(Amphisilidae)	1,51 (1)
Alabetidae	1,68 (1)	Amphisoleniaceae	7,64 (2)
ALABETOIDEI	1,68	Amphithoidae	2,24(10)
(Alabidae)	1,68 (1)	Amphiumidae	5,05 (4)
Alariaceae	7,77 (4)	Amphiuridae	6,92 (1)
Alaudidae	5,79 (3)	Ampullariidae	3,10 (9)
Albulidae	1,21 (3)	Anabantidae	1,76 (5)
Alcidae	5,68 (2)	ANABANTOIDEI	1,76
Alcippidae	2,14 (1)	Anablepidae	1,57 (6)
Alepisauridae	1,32 (7)	Anacrogynaceae	9,04 (1)
		•	

Anarhichadidae	1,71 (2)	ARANEAE	6,61
ANASPIDACEA	2,19	Arapaimidae	1,28 (1)
Anatidae	5,64 (1)	Arbaciidae	6,93 (5)
	3,13 (4)		6,47
Ancylidae		ARCHIANNELIDA	2 16 (1)
ANDREAEALES	9,08	Arcidae	3,16 (4) 5,63 (1)
ANGIOSPERMAE	9,41	Ardeidae	
Anguillidae	1,43 (2)	Arenicolidae	6,50 (4)
ANGUILLIFORMES	1,42	Argentinidae	1,23 (5)
ANGUILLOIDEI	1,43	Argiopidae	6,61 (1)
ANNELIDA	6,46	Argonautidae	3,21 (8)
Anniellidae	5,34 (2)	Ariciidae	6,50 (-1)
ANOMALODESMACEA	3,18	Ariidae	1,41 (2)
Anomalopidae	1,61(10)	Arripidae	1,70(29)
Anomiidae	3,16 (9)	ARTHROPODA	6,54
ANOMOCOELA	5.10	ARTIODACTYLA	4,08
Anoplopomidae	5,10 1,78 (8)	Ascaphidae	5,08 (1)
ANOPLURA	6,75	(Ascelichthyidae)	1,78(13)
Anostomidae	1,38 (4)	ASCIDIACEA	5,96
			5,96 (5)
ANOSTRACA	2,02	Ascidiidae	8 70
Anotopteridae		ASCOLICHENES	8,70
ANOTOPTEROIDEI	1,29	ASCOMYCETES	8,51
ANSERIFORIÆS	5,64	Ascoseiraceae	7,80(7)
Antennariidae	1,95 (2)	Asellidae	2,23 (8)
Antennariini	1,95 (2)	ASPERGILLALES	8,54
ANTENNARIOIDEI	1,95	Asperococcaceae	7,72(10)
ANTHOCEROTALES	9,05	(Aspidophoroididae)	1,78(19)
ANTHOZOA	6,19	Asplanchnidae	6,37 (3)
ANTHROPOIDEA	4,32	(Aspredinidae)	1,41(26)
Anthuridae	2,23 (1)	Astacidae	2,29 (3)
Antigoniini	1,62 (3)	Astartidae	3,17 (1)
(Anura)	5,07	Astasiaceae	7,70 (2)
Aoteidae	1,44.(6)	(Astasiidae)	7,70 (2)
APHANIPTERA	6,88	ASTEROIDEA	6,91
Aphredoderidae	1,59 (2)	Astronesthidae	1,25 (5)
APHREDODEROIDEI	1,59		6,91 (1)
	6,49 (3)	Astropectinidae	1,56
Aphroditidae	1,23(11)	(Atelaxia)	2,29(23)
(Aplachitonidae)		Atelecyclidae	
APLACOPHORA	3,02	Ateleobrachini	1,49 (1)
Aploactidae	1,78 (4)	Ateleopidae	1,33 (1)
(Aplodactylidae)	1,70(69)	ATELEOPIFORMES	1,33
Aplodontidae	4,16 (1)	Atherinidae	1,65 (2)
APODA	2,15	Atherinini	1,65 (2)
(Apoda)	5,02	Atlantidae	3,10(22)
(Apodes)	1,42	(Atracheata)	9,01
Apodidae	2,03 (1)	Atyidae	2,28 (9)
Apogonidae	1,70(12)	Auchenipteridae	1,41 (4)
(Apolectidae)	1,70(25)	Aulopidae	1,32 (2)
Aponogetonaceae	9,43 (5)	Aulorhynchidae	1,50 (2)
Appendiculariidae	5,95 (1)	Aulostomidae	1,51 (1)
(Apteronotidae)	1,39 (2)	AURICULARIALES	8,74
APTERYGIFORIES	5,55	Auxidini	1,80 (1)
APTERYGOTA, THYSANURA,	2922	AVES - see also BIRDS	5,50
PROTURA, COLLEMBOLA	6,67		
· ·		Avocettinini	, , , , , ,
AQUATIC EMBRYOPHYTES	9,97	Avocettinopsidae	1,44 (4)
ARACHNIDA	6,57	Axiidae	2,29(17)
ARACHNOIDEA	6,55	Axinellidae	6,15 (4)
		Azollaceae	9,25 (3)

BACILLARIOPHYCEAE BACTERIA (Bagariidae) Bagridae Balaenidae Balaenopteridae Balanidae BALANOGLOSSIDA BALANOPSIDALES Balistidae Balistini BALISTOIDEI Bangiaceae BANGIALES Banjosidae BASIDIOMYCETES BASOMMATOPHORA Bathyclupeidae BATHYCLUPEIFORMES Bathydraconidae Bathydraconidae Bathylagidae Bathymasteridae BATHYNELLACEA Bathynellidae BATHYNELLACEA Bathynellidae Bathyteroini BATIDALES (Batrachia) (Batrachidae) Batrachoididae BATRACHOIDIFORMES Batrachoidini Batrachospermaceae Bdellostomatidae	7,41 8,01 1,41(13) 1,41(13) 1,41(13) 1,41(13) 1,41(13) 4,23(2) 2,13(3) 5,92 9,56 1,89(3) 1,89(3) 1,89(3) 1,89(1) 7,82(1) 7,82(1) 1,70(93) 1,70(93) 1,49(6) 1,70(75) 2,19(1) 1,23(6) 1,70(75) 2,19(1) 1,32(5) 9,61 5,00 1,93(1) 1,93(1) 1,93(1) 1,93(1) 1,93(1) 1,93(1) 1,93(1) 1,93(1)	Bonolliidae Bonnemai soniaceae Bopyridae Bosminidae Bothidae Bothini Botiini Botrydiaceae Botryllidae Bougainvillidae Bovichthyidae (Bovichtidae) Brachionichthyidae BRACHIOPODA Brachycephalidae Branchinectidae BRANCHIOPODA (Branchiostegidae) (Branchiostegidae) (Branchiostomidae) BRANCHIURA Bregmacerotidae BRYALES BRYOPHYTA BRYOZOA Buccinidae Bucephalidae Bufonidae Bullidae Bullidae Bullidae Bunocephalidae Butomaceae	6,53 (1) 7,84 (5) 2,23(11) 2,05 (1) 1,83 (1) 1,40 (5) 7,25 (7) 6,17 (91) 1,70 (91) 1,70 (91) 1,70 (1) 1,70 (2) 2,01 (6) 6,43 (7) 2,01 (1) 2,11 (3) 1,48 (1) 9,09 (8) 6,27 (1) 1,41 (26) 9,43 (2)
Belonidae BELONIFORMES Bembropidae Benthauphausiidae Beroidae Berycidae Berycidae BERYCIFORMES (Berycomorphi) BICORNES Biddulphioideae BIRDS, Aquatic BIRDS, General BIRDS, Misc. BLASTOCLADIALES Blastodiniaceae (Bleekeriidae) Blenniidae BLENNIOIDEI (Blepsiidae) Bodotriidae Bombycillidae Bomolochidae	1,47 (1) 1,47 1,70(80) 2,26 (2) 6,22 (1) 1,61 (2) 1,61 1,61 9,84 7,42 (3) 5,87 5,50 5,89 8,35 7,66 (6) 1,72 (4) 1,71 (1) 1,71 1,78 (13) 2,21 (3) 5,79 (16) 2,10 (27)	Caenestheriidae Calanidae CALCAREA Caligidae Callianassidae Callichthyidae Callionymidae Callionymidae (Calliopiidae (Callipterygidae) Callorhynchidae Callymeniaceae (Callyodontidae) Calosiphoniaceae Camallanidae Cancellariidae Canthigasteridae) Canthocamptidae Caprellidae	2,04 (4) 2,10 (1) 6,14 2,10(19) 2,29 (4) 1,41(27) 1,73 (1) 1,73 2,24 (7) 1,70(78) 1,12 (3) 7,86 (3) 1,70(65) 7,87 (1) 6,33 (1) 3,09(15) 2,29 (9) 1,90 (2) 2,10(13) 2,24(13)

CAPRIMULGIFORMES	5,73 1,62 (3)	Cetomimidae	1,32 (9)
Caproidae	1.62 (3)	Cetorhinini	1,07 (3)
Caproini	1,62 (3)	CETACEA	4.21
Capsosiraceae	7,96 (2)		
	2 10 (2)	Chaoriah thridao	1,41(15) 1,70(94)
Capulidae	3,10 (2) 1,78 (3)	Chaenichthyluae	7 94 (9)
Caracanthidae	1, (0 (3)	Chaetanglaceae	1,04 (0)
Carangidae	1,70(23)	Chaetodermatidae	3,02 (3)
(Carapidae)	1,72 (3)	(Chaetodipteridae)	1,70(49)
Carcharhinidae	1,08 (2)	Chaetodontidae	1,70(52)
(Carchariidae)	1,08 (2)	Chacidae Chaenichthyidae Chaetangiaceae Chaetodermatidae (Chaetodipteridae) Chaetodontidae CHAETOGNATHA Chaetophoraceae	6,45
(Carcharinida)	1,08	Chaetophoraceae	7,12 (1)
Cardiidae	3,17 (9)	CHAETOPHORALES	7,12
Carditidae Carettochelyidae Carinariidae Caristiidae	3,17 (2)	Chaetosiphonaceae	7,17 (7)
Carettochelvidae	5,31(10)	Chaetosphaeridiaceae	7.12 (4)
Carinariidae	3,10(21)	Chamaeidae	5-79 (9)
Cariatidae	1,61 (4)	Chamaed phonaceae	7 93 (2)
CARNIVORA	4,04	CHAPTA DET DUOMAT DE	7 03
Cassididae	2 10(10)	(Charres ab the ride a)	1 70(01)
	3,10(19)	(Chaminicuthyrdae)	7, 10(74)
Castoridae	4,16(1)	Champiaceae	(,00 (1)
CASUARIIFORMES	5,54	CHAETOGNATHA Chaetophoraceae CHAETOPHORALES Chaetosiphonaceae Chaetosphaeridiaceae Chamaeidae Chamaesiphonaceae CHAMAESIPHONALES (Chamnichthyidae) Champiaceae Champsodontidae Chanidae (Channidae)	1,70(09)
Catostomidae	1,40 (1)	Chanidae	1,22 (2)
CAUDATA	5,03	(Channidae)	1,67 (1)
Caulerpaceae	7,17 (2)	CHANOIDEI	1,22
Caulolepidae	1,61 (7)	Characeae	7,18 (1)
Caulophrynidae	1,96 (9)	(Characidae)	1,38 (1)
Cavolinidae	3,11(10)	Characinidae	1,38 (1)
(Cebedichthyidae)	3,11(10) 1,71(10)	CHARACINOIDEI	1,38
CELASTRALES	9,79	(Characondontidae)	1,57 (4)
(Centraciontidae)	1,04 (1)	CHARADRIIFORMES	5,68
CENTRALES	7,42	CHARALES	7,18
Centrarchidae	1,70(10)	Chaudhuriidae	1,85 (1)
Centrechinidae	6,93 (1)	CHAUDHURIIFORMES	1,85
Centriscidae	1,51 (4)	Chauliodontidae	1,25 (4)
Centropagidae	2,10 (2)	Chaunacidae	1,95 (4)
Centropomidae	1,70 (1)	CHELONETHIDA	6,60
CENTROSPERMAE	9,67	CTIDI CAIT I	5,31
(Cephalacanthidae)	1,79 (1)	Cheloniidae	5 24 (7)
	F 02		5,31 (7)
CEPHALODISCIDA	5,93	Cheluridae	2,24(12)
CEPHALOPODA	3,19	Chelydidae	5,31 (9)
(Cephalopteridae)	1,10 (8)	Chelydridae	5,31 (2)
Cepolidae	1,70(60)	Chiasmodontidae	1,70(90)
Ceramiaceae	7,89 (1)	Chilodactylidae	1,70(70)
CERAMIALES	7,89	Chimaeridae	1,12 (1)
Ceratiaceae	7,67 (7)	CHIMAERIFORMES	1,12
Ceratiidae	1,96 (8)	Chimarrhichthyidae	1,70(77)
CERATIOIDEI	1,96	Chirocentridae	1,22 (1)
Ceratocoryaceae	7,67 (9)	CHIROCENTROIDEI	1,22
Ceratodidae	1,13 (1)	Chirocephalidae	2,02 (3)
CERATODIFORMES	1,13	(Chirolophidae)	1,71(11)
(Cerdalidae)	1,71(13)	Chironemidae	1,70(68)
Cerithiidae	3,10(10)	CHIROPTERA	4,18
Cerithiopsidae	3,10(11)	Chlamydomonadaceae	7,03 (1)
Certhidae	5,79 (8)	(Chlamydonomadidae)	7,03 /part7
CESTODARIA	6,29	CHLAMYDOMONADINEAE	7,03
CESTODES	6,30	Chlamydoselachidae	1,05 (1)
CESTOIDEA	6,28	Chlorellaceae	7,06 (3)
		221010110000	1,900 (3)

Chlorobotrydaceae	7,23 (3)	Clupeini	1,21 (5)
Chlorococcaceae	7,06 (1)	CLUPEOIDEI	1,21
CHLOROCOCCALES	7,06	(Clupisudidae)	1,28 (3)
Chlorodendraceae	7,05 (1)	CNIDOSPORIDIA	6,07
CHLORODENDRINEAE	7,05	Cobitidae	1,40 (5)
CHLOROMONADINEAE	7,69	Cobitini	1,40 (5)
Chlorophthalmini	1,32 (5)	Coccolithophoridaceae	
CHLOROPHYCEAE	7,01	Codiaceae	7.17 (5)
Chlorotheciaceae	7,23 (5)	COELACANTHIFORMES	1,15
Chondracanthidae	2,10(24)	COELACANTHOIDEI	1,15
(Chondrobrachii)	1,33	Coenagridae	6,77 (1)
(Chonerhinidae)	1.90 (2)	Coelastraceae	7,06 (8)
Chordaceae	1,90 (2) 7,77 (1)	COELENTERATA	6,16
CHORDATES, Invertebrate	5,90	Coleochaetaceae	7,12 (3)
CHORDATES, Misc.	6,99	COLEOPTERA	6,84
CHORDATES, Other	5,	COLIIFORMES	5,75
Choreocolaceae	7,86(10)	COLLEMBOLA	6,67
Choristocarpaceae	7,78 (4)	Colubridae	5,35 (2)
(Chromidae)	1,70(59)	Columbellidae	3,09 (6)
Chrococcaceae	7,92 (1)	Columbidae	5,69 (1)
CHROOCOCCALES	7,92	COLUMBIFORMES	5,69
Chromulinaceae	7,32 (1)	COLUMNIFERAE	9,76
(Chromulinidae and	1932 (1)	COLYMBIFORMES	5,60
Ochromonadidae)	7,32	Comephoridae	1,78(15)
Chrysocapsaceae	7,32(14)	Compositae	9,91 (1)
CHRYSOMONADALES	7,32	CONCHOSTRACA	2,04
(Chrysomonadida)	7,31	Congiopodidae	1,78(11)
CHRYSOPHYCEAE	7,31	Congridae	1,43(13)
Chrysosphacraceae	7,33 (1)	Congrogadidae	1,71 (4)
CHRYSOSPHAERALES	7,33	Conidae	3,09(13)
Chrysostomataceae	7,33 (2)	CONIFERALES	9,34
CHRYSOTRICHALES	7,34	CONJUGALES	7,14
Chthamalidae	2,13 (4)	Conochieidae	6,37 (2)
Chydoridae	2,05 (6)	CONTORTAE	9,87
CHYTRIDIALES	8,33	COPEPODA	2,09
Cichlidae	1,70(59)	CORACIIFORMES	5,77
	5,63	Coralliidae	6,19 (1)
CILIATA	6.09	Corallinaceae	7,86 (9)
* Cinclidae	6,09 5,79(10)	Corbiculidae	3,17(21)
Cirolanidae	2,23 (2)	(Coregonidae)	1,23 (1)
Cirratulidae	6,50 (2)	Coregonini	1,23 (1)
Cirrhitidae	1,70(67)	Corgoderidae	6,27 (4)
CIRRIPEDIA	2,12	Corophiidae	2,24(11)
(Cirrostomi)	1,01.	Corvidae	5,79 (5)
Citharinidae	1,38 (6)	Coryphaenidae	1,70(28)
CLADOCERA	2,05	(Coryphaenoididae)	1,49 (1)
CLADOPHORALES	7,11	Corystidae	2,29(22)
Cladostephaceae	7,78 (3)	Cotingidae	5,79 (1)
Claridae	6,17 (4)	Cottidae	1,78(13)
Clariidae	1,41(18)	Cottocomephoridae	1,78(14)
Clausiidae	2.10(28)	Cottocomephorini	1,78(14)
Clinidae	1,71 (8)	COTTOIDEI	1,78
Clionidae	3,11(11)	Cottunculidae	1,78(17)
Clionidae	6,15 (2)	Cragonidae	2,28 (2)
Clupeidae	1,21 (5)	Cranchiidae	3,21 (7)
CLUPEIFORMES	1,20	Crangonidae	2,28 (6)
	,		, , ,

(Cranoglanidae) Crassatellitidae Creediidae CRINOIDEA (Crocodilia) Crocodylidae Cromeriidae CROMERIOIDEI Cruciferae	1,41 (8) 3,17 (3) 1,70(83) 6,90 5,36 5,36 (1) 1,22 (5) 1,22 9,71 (1) 7,86 (6)	Cyprinodontidae CYPRINODONTIFORMES CYPRINODONTOIDEI CYPRINOIDEI Cyrenidae Cyrtophoraceae Cystoseiraceae Cytheridae	er	1,57 (2) 1,57 1,57 1,40 3,17 (5) 7,32 (4) 7,80 (3) 2,07 (1)
Cruoriaceae CRUSTACEANS, GEN. CRUSTACEANS, MISC. (Cryptacanthodidae) Cryptococcaceae CRYPTOCOCCALES Cryptomonadaceae CRYPTOMONADALES (Cryptomonadidae) (Cryptomonadidae) CRYPTONEMIALES CRYPTOPHYCEAE Crytobranchidae Crytophoraceae CTENOPHORA CUCULIFORMES CUCURBITALES Culicidae CUMACEA Cuspidariidae Cyamidae CUTLERIALES Cyanochloridaceae (Cyanophyceae) Cyathocephalidae Cybiidae CYCADALES Cyclopidae Cyclopteridae Cyclopidae Cyclopteridae Cymnarchidae Cymnarchidae Cymnarchidae Cymnarchidae Cymothoidae Cymoglossidae Cyperaceae CYPERALES Cyphosidae Cypridinidae Cypridinidae Cypridinidae Cyprini Cyprinidae Cyprinidae Cyprinidae Cyprinidae Cyprinidae Cyprinidae Cyprinidae Cyprinidae	7,86 (6) 2,99 1,71 (10) 7,53 (1) 7,53 (1) 7,52 (1) 7,53 (4) 5,70 (1) 2,74 (2) 7,91 (6) 1,75 (2) 7,91 (6) 1,75 (2) 7,91 (6) 1,75 (2) 1,78 (3) 1,78 (4) 1,79 (4) 1,70 (47) 3,10 (17) 2,08 (1) 1,37 (2) 1,37 (2) 1,37 (2) 1,37	DACRYOMYCETALES Dactylopteridae DACTYLOPTERIFORMES Dactyloscopidae Dalliidae Daphniidae Darwinulidae Dasyaceae (Dasyatidae) (Dasybatidae) Dasycladaceae DECAPODA Delesseriaceae Delphinapteridae Delphinidae Dentaliidae Dentaliidae Derepodichthyidae Derichthyidae Derichthyidae Dermatemyidae Dermatemyidae Dermocarpaceae Dermochelidae DESMARESTIALES Desmidiaceae DESMIDIOIDEAE Desmomonadaceae DESMOMONADALES (Dianidae) Diaptomidae Diastylidae (Diatoms) Dibothriorhynchiidae DIBRANCHIA Diceratiidae Dichelesthiidae Dichistiidae Dichistiidae Dichistiidae Dictyosiphonaceae DICTYOTALES Didelphyidae Didemnidae DIGENA		8,79 (1) 1,79 (87) 1,79 (87) 1,79 (87) 1,79 (87) 1,79 (87) 1,70 (87) 1,70 (87) 1,70 (87) 1,70 (87) 1,70 (87) 1,70 (87) 1,70 (87) 1,70 (95) 1,70 (95) 1,70 (96) 1,70 (9
Cyprinini	1,40 (2)			

/	5 (1)		0
(Diniferida -	7,64/	ECCRINALES	8,47
Dinoflagellida)	7,65	Echelidae	1,43(14)
Dinocapsaceae	7,67(11)	Echeneidae	1,87 (1)
Dinocloniaceae	7,68 (3) 7,68 (1)	ECHENEIFORMES	1,87
Dinococcaceae	7,68 (1)	(Echidnidae)	1,43 (6)
DINOCOCCALES	7,68	Echinidae	6,93 (4)
DINOFLAGELLATA	7,65	ECHINODERMATA	6,89
(Dinoflagellida, adinida)	7,63	ECHINOIDEA	6,93
(Dinoflagellida, -	7,64/	Echinorhinini	1,09 (1)
diniferida)	7,65	Echinorhynchidae	6,35 (1)
DINOPHYCEAE	7,61	Ectinosomidae	2,10 (8)
Dinophysiaceae	7,64 (1)	Ectocarpaceae	7,72 (1)
DINOPHYSIALES	7,64	ECTOCARPALES	7,72
(Dinophysidae)	7,64 (1) 7,68 (2)	ECTOPROCTA	6,42
Dinotrichaceae DINOTRICHALES	7,68 (2) 7,68	EDENTATA	4,24
Diodontidae	1,90 (3)	Elachistaceae	7,72 (3)
Diomedeidae	5,61 (1)	(Elassomidae) Electrophoridae	1,70(10)
Diosaccidae	2,10(12)	Eleginini	1,39 (4) 1,48 (4)
DIOSPYRALES	9,85	Electridae	1,77 (1)
Diphyllobothriidae	6,30 (7)	Eleotrini	1,77 (1)
DIPLASIOCOELA	5,12	(Elephenoridae)	1,61 (4)
Diplomystidae	1,41 (1)	Ellobiidae	3,13 (1)
DIPTERA	6,87	Elopidae	1,21 (1)
Diretmidae	1,61 (3)	Elysiidae	3,11(19)
Discobatidae	1,10 (3)	EMBIOPTERA	6,73
(Discocephali)	1,87	Embiotocidae	1,70(61)
Discoglossidae	5,09 (1)	(Emblemariidae)	1,71 (8)
Discoideae	7,42 (1)	EMBRYOPHYTA, GEN.	9,00
Doiichthyidae	1,41 (9)	Emmelichthyidae	1,70(30)
Dolichopterygidae	1,21 (8)	ENANTIOBLASTAE	9,45
(Doliichthyidae)	1,77 (2)	ENCHYTRAIDAE	, .
Doliidae	3,10(18)	Enchytraidae	6,51 (2)
Donacidae	3,17(15)	Encoeliaceae	7,72(11)
Doradidae	1,41 (3)	Endocladiaceae	7,86 (2)
Dorididae	3,11(15)	ENDOGONALES	8,45
Doropygidae	2,10(18)	Endonemataceae	7,93 (3)
Dorosomatini Doryichthyini	1,21 (5) 1,51 (6)	Engraulidae	1,21 (6)
DOTHIDEALES	8,59	Enoplosidae ENTEROPNEUSTA	1,70(53) 5,91
Dotonidae	3,11(17)	ENTOMOPHTHORALES	8,42
Draconettidae	1,73 (2)	Entophysalidaceae	7,92 (3)
Dreissensiidae	3,16(11)	ENTOPROCTA	6,41
(Drepanichthyidae)	1,70(50)	EPHEMEROPTERA	6,76
Drepanidae	1,70(50)	Ephippidae	1,70(49)
Dugongidae	4,14 (1)	Ephippini	1,70(49)
Dumontiaceae	7,86 (5)	Epibulini	1,70(63)
DUPLICIDENTATA	4,17	Epithemioideae	7,43 (5)
Durvilleaceae	7,80 (6)	Epitoniidae	3,09 (2)
Dussumieriini	1,21 (5)	Equisetaceae	9,18 (1)
Dysommidae	1,43(17)	EQUISETALES	9,18
Dytiscidae	6,84 (2)	Eremosphaeraceae	7,06 (2)
		Ereuniini	1,78(12)
1 de la companya del companya de la companya del companya de la co		Ergasilidae	2,10 (7)
$f^{\prime\prime}$		(Erilepidae)	1,78 (8)

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ERRANTIA Polychaeta Erycinidae Esocidae ESOCOIDEI Euchaetidae EUCILIATA EUCONJUGATAE EUCOPEPODA Euglenaceae (Euglenidae) EUGLENINEAE (Euglenoidida) EUMYCOPHYTA Eunotioideae EUPHAUSIACEA Euphausiidae Eurypharyngidae Euryphoridae (Eventognathi) Evermannellidae Exocoetidae EXOCOETOIDEI	6,49 3,17 (6) 1,24 (3) 1,24 2,10(30) 6,11 7,15 2,10 7,70 (1) 7,70 (1) 7,70 8,31 7,43 (2) 2,26 2,26 (1) 1,35 (2) 2,10(20) 1,40 1,32 (4) 1,47 (4) 1,47	Gadidae GADIFORMES Gadini GADOIDEI Gadopsidae Galatheidae Galaxiidae GALAXIIFORMES Galeodidae (Galeoidei) GALLIFORMES Gambusiini Gammaridae GARRYALES Gasteropelecidae GASTEROSTEIFORMES Gastrocotylidae Gastrocotylidae Gastrotokeini GASTROTRICHA GAVIIFORMES	1,48(4) 1,48 1,48(4) 1,48 1,70(66) 2,29(19) 1,31 (1) 1,31 3,09(18) 1,06 5,66 1,57 (7) 2,24 (8) 9,59 1,38 (2) 1,50 (1) 1,50 6,26 (6) 1,40 (4) 3,05 1,51 (6) 6,38 5,59
FAGALES FALCONIFORMES Fierasferidae FILICALES FILICINAE FISHES, GEN. FISHES, MISC. FISSIPEDIA Fissurellidae (Fistulariidae) (Fitzroyiidae) Floricepitidae FLORIDEAE (Flutidae) Fontinalaceae Formionidae Fragilarioideae Fringillidae Frucaceae FUCALES Fundulini "FUNGI - AQUATIC; FUNGI AND VIRUSES PARASITIC IN AQUATIC ORGANISMS" FUNGI, GEN. "FUNGI IMPERFECTI" FUNGI, MISC. FUNGI (incl. BACTERIA). VIRUSES Furcellariaceae	9,54 5,65 1,72 (3) 9,24 9,21 1,00 1,99 4,05 3,07 (2) 1,57 (5) 6,30 (4) 7,83 1,68 (2) 9,09 (1) 1,70 (25) 7,43 (1) 5,79 (24) 7,80 (1) 7,80 (1) 7,80 (1) 7,80 (2) 8,98 8,91 8,99 8,7,87 (4)	Gelidiaceae GELIDIALES Gempylidae GEPHYREA Gibberichthyidae Gigantactidae Giganturidae Giganturidae GIGANTURIFORMES Gigartinaceae GIGARTINALES GINKGOALES Girellidae Glaucosomidae Glenodiniaceae (Glenodiniidae) Gloeosiphoniaceae Gloiopeltidaceae GLUMIFLORAE (Gnathacanthidae) GNETALES Gobiesocidae GOBIESOCIFORMES Gobiidae Gobiini Gobiobotini GOBIOIDEI (Gobioididae) Gobioidini Gonatozygaceae Goniodomaceae Gonorhynchidae	7,85 (1) 7,85 (1) 7,85 (1) 7,85 (1) 6,52 (1) 1,96 (6) 1,34 (1) 1,34 (16) 7,87 (13) 7,67 (3) 7,67 (3) 7,67 (3) 7,86 (1) 7,86 (1) 9,47 (6) 9,47 (6) 9,47 (2) 1,77 (2)

GONORHYNCHOIDEI.	1,26	HELOBIAE	9,43
Gonostomidae	1,25 (1)	Helogenidae	1,41(23)
Gonyaulaceae	7,67 (5)	(Helostomidae)	1,76 (5)
Goodeidae	1,57 (4)	HELOTIALES	8,63
Gracilariaceae	7,87(12)	HELVELLALES	8,66
Gramineae	9,47 (1)	Hemerocoetidae	1,70(81)
Grammicolepidae	1,62 (2)	(Hemichordata)	5,91
Grapsidae	2,29(13)	Hemiodontidae	1,38 (5)
Grateloupiaceae	7,86 (4)	HEMI PTERA	6,79
Gruidae	5,67 (1)	Hemirhamphidae	1,47 (3)
GRUIFORMES	5,67	HEMISPHAERIALES	8,62
GRUINALES	9,77	(Hemitripteridae)	1,78(13)
Gryodactylidae	6,26 (1)	Hemiuridae	6,27 (7)
Gulaphallini	1,58 (1)	HEPATICAE	9,02
GUTTIFERALES	9,73	(Hepatidae)	1,74 (2)
Gymnarchidae	1,36 (1)		
GYMNARCHOIDEI	1,30 (1)	(Heptatretidae)	1,03 (1)
	1,36	Hermaeidae	3,11(18)
GYMNODINIACEAE	7,66 (2)	Hesionidae	6,49 (1)
(Gymnodiniidae)	7,66 (2)	Heterenchelyidae	1,43 (7)
GYMNODINIOIDEAE	7,66	Heterocapsaceae	7,22 (2)
(Gymnodinioida)	7,66	Heterochloridaceae	7,22 (1)
(Gymnodontes)	1,90 (2)	HETEROCHLORIDALES	7,22
GYMNOGLOSSA	3,09	Heterocloniaceae	7,24 (2)
(Gymnonoti, Clanencheli)	1,39	HETEROCOCCALES	7,23
GYMNOPHIONA	5,02	(Heterocongridae)	1,43(13)
GYMNOSPERMAE	9,31	Heterodontidae	1,04 (1)
Gymnotidae	1,39 (3)	•	
GYMNOTOIDEI		HETERODONTIFORMES	1,04
GYNANDRAE	1,39	HETERODONTOLDEL	1,04
	9,49	(Heterognathi)	1,38
Gyrinocheilidae	1,40 (3)	(Heterokontae)	7,21
Gyrocotylidae	6,29 (2)	(Heteromi)	1,46
		(Heteronemidae)	7,70(3)
		Heterophyidae	6,27 (5)
Halacaridae	6,62 (2)	(Heteropneustidae)	1,41(17)
Halimochirurgini	1 ,89 (1)	Heterorhizidaceae	7,22 (4)
Haliotidae	3,07 (3)	HETEROSIPHONALES	7,25
Halocypridae	2,08 (2)	(Heterosomata)	1,81
Halorrhagidaceae	9,75 (1)	Heterotidae	1,28 (3)
Halosauridae	1,45 (1)	HETEROTRICHALES	7,24
HALOSAURIFORMES	1,45	Hexagrammidae	1,78 (7)
•	7,23 (1)		1,05 (2)
Halosphaeraceae		Hexanchidae	
HAMAMELIDALES	9,69	HEXANCHI FORMES	1,05
Haplochitonidae	1,23(11)	(Hexapoda)	6,66
Haplodactylidae	1,70(69)	HIGHER PLANTS, AQUATIC	9,97
(Haplodoci)	1,93	HIGHER PLANTS, MISC.	9,99
(Haplomi)	1,24	Himanthaliaceae	7,80 (2)
Haploscleridae	6,15 (3)	Himantolophidae	1,96 (3)
Harpacticidae	2,10 (9)	Hippidae	2,29 (6)
(Harpagiferidae, Jordan)	1,70(92)	Hippocampini	1,51 (6)
Harpagiferini	1,70(92)	(Hippoglossidae)	1,83 (2)
Harrimaniidae	5,92 (2)	Hippolytidae	2,28 (5)
Haustoriidae	2,24 (5)	Hippoporinidae	6,42 (1)
Helicinidae	3,07 (7)	Hippopotamidae	4,09 (1)
Helminthocladiaceae	7,84 (7)	HIRUDINEA	6,53
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Hirundinidae (Histichthyes) Histiophoridae Histiopteridae Holocentridae Holopedidae HOLOTHURIOIDEA Homalopteridae Homaridae (Nephropsidae) Hoplegnathidae Hoplichthyidae Hoplophoridae Hormosiraceae	5,79(4) 1,54 1,75 (3) 1,70(54) 1,61(11) 2,05 (2) 6,94 1,40 (4) 2,29 (2) 1,70(58) 1,78(10) 2,28(10) 7,80 (5)	INVERTEBRATES, GEN. 6,98 INVERTEBRATES, MISC. 6,99 INVERTEBRATES, OTHER 6, Ischnochitonidae 3,03 (2) Isochrysidaceae 7,32 (5) Isoetaceae 9,16 (1) ISOETALES 9,16 (Isokontae) 7,01 ISOPODA 2,23 ISOPTERA 6,72 (Isospondyli, Malacopterygii) 1,20 (Isurida) 1,07
Hydrachnidae Hydridae Hydrobiidae Hydrocharitaceae Hydrodictyaceae Hydrophidae Hydrophilidae	6,62 (1) 6,17 (3) 3,10(23) 9,43 (4) 7,06 (7) 5,35 (1) 6,84 (1) 9,25	Janiridae 2,23 (9) Janthinidae 3,09 (1) Jenynsiidae 1,57 (5) (Jordaniidae) 1,78(13) JUGERMANNIALES 9,04 JUGLANDALES 9,58
HYDROPTERIDALES HYDROZOA Hydruraceae Hyellaceae Hylidae HYMENOGASTRALES HYMENOPTERA Hyodontidae Hyperiidae Hyperiidae Hypneaceae HYPOCREALES Hypomesini Hypophthalmidae Hypopthalmichthyini (Hypoptychidae) HYRACOIDEA	6,17 7,32(16) 7,94 (2) 5,11 (2) 8,78 6,86 1,27 (1) 2,24 (1) 7,87 (9) 8,60 1,23 (4) 1,41924) 1,40 (2) 1,72 (4) 4,12	Kellyellidae 3,17 (7) KINORHYNCHA 6,39 Kinosternidae 5,31 (4) Kneriidae 1,22 (3) Kolkwitziellaceae 7,67 (2) KOLKWITZIELLOIDEAE 7,67 Korsogasteridae 1,61 (8) Kowalevskiidae 5,95 (2) Kraemeriidae 1,77 (4) Kuhliidae 1,70 (9) Kurtidae 1,76 (7) KURTOIDEI 1,76 (Kyphosidae) 1,70(47)
Icelidae Icelini (Ichthyocephali) Icosteidae ICOSTEIFORMES Icteridae Idiacanthidae Idotheidae Ilyophidae Inachidae Indostomidae Inermiidae Iniidae (Iniomi) INSECTA INSECTIVORA INVERTEBRATES, AQUATIC	8,61 1,78(12) 1,78(12) 1,78(12) 1,68 1,84 (1) 1,84 5,79(22) 1,25 (7) 2,23 (7) 1,43(16) 2,29 (8) 1,50 (3) 1,70(31) 4,22 (1) 1,32 6,66 4,03 6,97	Labiatae 9,86 (2) LABOULBENIALES 8,57 Labracoglossidae 1,70(18) Labridae 1,70(63) LABYRINTHULALES 8,23 (Lacertilia) 5,34 Lactariidae 1,70(19) Laevoceratiidae 1,96 (5) LAGENIDIALES 8,34 Lagyniceae 7,32(13) (Lamellibranchiata) 3,15 Laminariaceae 7,77 (2) LAMINARIALES 1,07 (3) LAMNOIDEI 1,07 Lamprichthyini 1,57 (2) Lampridae 1,53 (1) LAMPRIDOIDEI 1,53

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Lampropidae	2,21 (6)	Littorinidae	3,10 (3)
Laniidae	5,79(18)	Lobeliaceae	9,91,(2)
Laomediidae	2,29(18)	Lobotidae	1,70(34)
Laophontidae	2,10(14)	Loefgreniaceae	7,96 (4)
Laridae	5,68 (1)	Loliginidae	3,21 (4)
LARVACEA	5,95	Lophiidae	1,95 (1)
Laternulidae	3,18 (1)	LOPHIIFORMES	1,94
(Latidae)	1,70 (1)	LOPHIOIDEI	1,95
Latilidae	1,70(16)	(Lophobranchii)	1,51
Latimeriidae		Lophogastridae	2,20 (2)
Latridae	1,15 (1)	Lophotidae	1,54 (2)
	1,70(71)		
Leathesiaceae	7,72 (4)	Loricariidae	1,41(28)
LEITNERIALES	9,57	LORICATA	5,36
Lemaneaceae	7,84 (3)	LORICATA	4,25
Lemnaceae	9,50 (1)	(Loricati)	1,78
LEMUROIDEA	4,30	(Luciidae)	1,24 (3) 3,17 (8)
Lentibulariaceae	9,86 (1)	Lucinidae	
Lepadidae	2,13 (2)	Luciocephalidae	1,76 (6)
(Lepidoglanidae)	1,40 (4)	LUCIOCEPHALOIDEI	1,76
(Lepidopidae)	1,74 (4)	Lumpenidae	1,71(12)
Lepidopleuridae	3,03 (1)	Lutianidae	1,70(32)
LEPIDOPTERA	6,83	Luvaridae	1,76 (1)
Lepidosirenidae	1,14 (1)	LUVAROIDEI	1,76
LEPIDOSIRENIFORMES	1,14	(Lyapomi)	1,45
Lepidosteidae	1,19 (1)	Lycodapodidae	1,71(16)
LEPIDOSTEIFORMES	1,19	(Lycodidae)	1,71(15)
Lepidoziaceae		•	
-	9,04	Lyconini	1,49 (1)
Lepochromonadaceae	7,32(10)	LYCOPERDALES	8,81
Leptestheriidae	2,04 (3)	LYCOPODIALES	9,14
Leptocephalidae)	1,43(13)	Lymnaeidae	3,13 (2)
Leptodoridae	2,05 (8)	Lynceidae	2,04 (1)
LEPTOMITALES	8,38	(Lyomeri)	1,35
Leptoscopidae	1,70(86)	Lyonsiidae	3,18 (2)
Lernaeidae	2,10(23)	Lysianassidae	2,24 (3)
Lernaeopodidae	2,10(25)		
Lessoniaceae	7,77 (3)		
Lethrinidae	1,70(38)	Macristiidae	1,21 (9)
Leuconidae	2,21 (2)	Macrocephenchelyidae	1,44 (5)
Leucosiidae	2,29 (7)	Macrorhamphosidae	1,51 (3)
Libellulidae	6,77 (2)	Macrothricidae	2,05 (5)
LICEALES	8,27	Macrouroididae	1,49 (2)
LIGUSTRALES	9,88	Macruridae	1,49 (1)
Ligydidae	2,23(10)	MACRURIFORMES	1,49
LILIIFLORAE		Macrurini	1,49 (1)
Limapontiidae	9,44	Macruronini	1,49 (1)
Limapontlidae	3,11(20)	Mactridae	
	2,04 (2)		3,17(10)
Limnichthyidae	1,70(84)	Maenidae	1,70(40)
Limnoriidae	2,23 (5)	Majidae	2,29(21)
LINGUATULIDA	6,63	Malacanthidae	1,70(17)
Linophrynidae	1,96(11)	(Malacichthyes)	1,84
Liognathidae	1,70(35)	(Malacosteidae)	1,25 (6)
(Liparidae)	1,78(20)	MALACOSTRACA	2,17
(Liparopidae)	1,78(20)	Malapteruridae	1,41(21)
Lipogenyidae	1,46 (1)	Maldanidae	6,50 (7)
Lithodidae	2,29(20)	Mallomonadaceae	7,32 (3)

Mallomonadaceae
Microstomidae 1,23 (7) Myliobatidae 1,10 (7) Mischococcaceae 7,22 (3) MyODOCOPA 2,08 Mitridae 3,09(10) MYRIANGIALES 8,55 Mniotiltidae 5,79(21) MYRIAPODA 6,65 Mobulidae 1,41 (20) Myrionemataceae 7,72 (2) Molgulidae 5,96(10) Myrocongridae 1,43 (5) Molidae 1,91 (1) Myrocongridae 1,43 (5) MOLLUSCS, AQUATIC 3,97 MYSIDACEA 2,20 MOLLUSCS, GEN. 3,00 Mysidae 2,20 (1) MOLUUSCS, MISC. 3,99 MYSTACOCETI 4,23 MOLQIDEI 1,91 Mytilidae 3,16(10) Monacanthini 1,89 (3) Myxini 1,03(Class)
Monadaceae (7,32 (9) Myxinidae 1,03 (3)

MYXOPHYCEAE Naccariaceae Naegeliellaceae	1,03 7,23 (2) 8,21 8,21 7,91 7,84 (4) 7,32(15)	Normanichthyidae Nostocaceae NOSTOCALES Nostochopsidaceae Notacanthidae NOTACANTHIFORMES Notacanthini (Notidanidae) (Notidanoidei) Notograptidae	1,78 (16) 7,95 (2) 7,95 7,96 (3) 1,46 (2) 1,46 1,46 (2) 1,05 (2) 1,05 1,71 (5)
Nannatherinini Nannastacidae (Narcationtidae) Nassidae NATANTIA	9,43 (7) 1,70(56) 1,65 (2) 2,21 (4) 1,11 (1) 3,09 (7) 2,28	Notopteridae NOTOPTEROIDEI NOTOSTRACA Notosudini Nototheniidae Nototheniini	1,27 (2) 1,27 2,03 1,32 (5) 1,70(92)
Naticidae Nautilidae Naviculoideae NEBALIACEA	3,10 (1) 3,20 (1) 7,43 (4) 2,18	Novumbrini Nuculanidae Nuculidae NUDA	1,24 (2) 3,16 (2) 3,16 (1) 6,22
Neenchelyidae Nemachilini NEMALIONALES Nemastomaceae	2,18 1,43(10) 1,40 (5) 7,84 7,87 (2)	Nymphaeacea Ochromonadaceae	9,70 (2) 7,32 (8)
NEMATHELMINTHES Nematistiidae Nematochrysidaceae	7,87 (2) 6,32 1,70(24) 7,34 (1)	(Ochromonadidae and Chromulinidae) Octocotylidae	7,32 6,26 (4)
NEMERTEA	6,33 1,41 6,34 6,31	Octopodidae Ocypodidae Odacidae Odobaenidae	3,21 (9) 2,29(14) 1,70(64) 4,06 (2)
Nemichthyidae Nemichthyini NEMICHTHYOIDEI Nemipteridae	1,44 (2) 1,44 (2) 1,44 1,70(33)	ODONATA Odontaspidae Odontaspini ODONTOCETI	6,77 1,07 (2) 1,07 (2) 4,22
Neoceratiidae Neoechinorhynchidae NEOGNATHAE Neomeniidae	1,96 (7) 6,35 (2) 5,57 3,02 (1)	(Odontostomidae) Oedogoniaceae OEDOGONIALES (Ogcocephalidae)	1,32 (4) 7,13 (1) 7,13
(Neophrynichthyidae) Neostethidac (Nephropsidae)	1,78(18) 1,58 (1) 2,29 (2)	Oicomonadaceae OLIGOCHAETA Olividae	1,95 (5) 7,32 (2) 6,51 3,09(11)
Nephroselmidaceae Nephrhydidae Neritidae Nerophiini	7,52 (2) 6,49 (2) 3,07 (6) 1,51 (6)	Olyridae Ommastrephidae Omosudidae Onchidiidae	1,41(19) 3,21 (5) 1,32 (6) 3,14 (1)
Nessorhamphidae Nettastomidae NEUROPTERA NIDULARIALES	1,43(12) 1,43(11) 6,80 8,83	Onchobothriidae Oncocephalidae Oneirodidae ONYCHOPHORA	6,30 (1) 1,95 (5) 1,96 (4) 6,64
Nitzschioideae Noctiluceae (Noctilucidae) Nomeidae	7,43 (6) 7,66 (4) 7,66 (4)	Onychoteuthidae Oocystaceae Ophichthyidae (Ophidia)	3,21 (6) 7,06 (4) 1,43(15) 5,35
NONCALCAREA	1,76 (4) 6,15	Ophididae	1,72 (2)

		/m	4.76 (2)
OPHIDIOIDEI	1,69	(Pampida)	1,76 (3)
Ophiocephalidae	1,67 (1)	Pandalidae	2,28 (4)
OPHIOCEPHALIFORIES	1,67	PANDANALES	9,51 2,10(21).
Ophioclinidae	1,71 (7) 6,92 (2)	Pandaridae	3,18 (3)
Ophiocomidae		Pandoridae	1,41(16)
Ophiocytiaceae	7,23 (5) 1,78 (7)	(Pangasiidae) Pantodontidae	1,29 (1)
(Ophiodontidae) OPHIOGLOSSALES	9,22	PANTODONTOIDEI	1,29
Ophiolepididac	6,92 (3)	(Paralichthyidae)	1,83 (1)
OPHIUROIDEA	6,92	Paralichthodini	1,83 (2)
OPIDIOIDEI	1,72	Paralichthyini	1,83 (1)
OPISTHOBRANCHIATA	3,11	Paramyxinidae	1,03 (2)
OPISTHOCOELA	5,09	(Parapercidae)	1,70(76)
Opisthocomidae	5,66 (5)	Parastenetriida	2,23(11)
Opisthognathidae	1,70(73)	Paridae	5,79 (6)
Opisthorchiidae	6,27 (6)	PARIETALES	9.72
(Opisthomi)	1 ,86	Pasiphaeidae	2,28 (8)
Opisthoproctidae	1,26 (1)	PASSERIFORMES	5,79
OPISTHOPROCTOIDEI	1,26	Pataecidae	1,78 (6)
(Oplegnathidae)	1,70(58)	PECORA .	4,11
(Oplichthyidae)	1,78(10)	PECTINIBRANCHIATA	3,08
Orectolobidae	1,07 (1)	Pectinidae	3,16 (8)
Orectolobini	1,07 (1)	(Pediculati)	1,94
Orestiini	1,57 (2)	PEDIPAL PI	6,58
(Orthagoriscidae) ORTHOPTERA	1,91 (1) 6,69	Pogasidae PEGASIFORMES	1,97 (1) 1,97
Oscillatoriaceae	7,95 (1)	Pelecanidae	5,62 (1)
Osmeridae	1,23 (4)	PELECANIFORMES	5,62
Osmerini	1,23 (4)	PELECYPODA	J9 0 L
(Osphronemidae)	1,76 (5)	(Lamellibranchiata)	3,15
(Ostariophysi,	, , , , , , , ,	Pelobatidae	5,10 (1)
Plectospondyli)	1,37	Pelomedusidae	5,31 (8)
Osteoglossidae	1,28 (2)	Pempheridae	1,70(43)
OSTEOGLOSSOIDEI	1,28	Penaeidae	2,28 (1)
Ostraciidae	1,90 (1)	PENNALES	7,43
OSTRACIODIEI	1,90	Pentapodidae	1,70(95)
(Ostraciontidae)	1,90 (1)	Peranemaceae	7,70 (3)
Ostracoberycidae	1,61 (6)	(Percesoces)	1,63
OSTRACODA (Ostracodermi)	2,06 1,90	Percidae	1,70(14) 1,69
	3,16 (7)	PERCIFORMES PERCOIDEI	1,70
Otariidao	4,06 (1)	Percophidae	1,70(79)
Owstoniidae	1,70(74)	Percopsidae	1,59 (1)
Oxudercidae	1,70(85)	PERCOPSIDOIDEI	1,59
(Oxylebidae)	1,78 (7)	PERCOPSIFORMES	1,59
		Peridicidae	5,66 (2)
		Peridiniaceae	7,67 (6)
Paedophoropodida e	3,09(17)	(Peridinieae)	5,66 (2) 7,67 (6) 7,61
Paguridae	2,29 (5)	(Peridinioida)	7,67
Palaemonidae	2,28 (3)	PERIDINIOIDEAE	7,67
PALAEOGNATHAE	5,51	Periophthalmidae	1,77 (3)
Palamedidae	5,64 (2)	PERISPORIALES	8,56
Palinuridae	2,29 (1)	PERISSODACTYLA	4,07
Palmellaceae PALPIGRADI	7,04 (2) 6,58	(Peristediidae) Peristediini	1,78 (2) 1,78 (2)
TATILIONADI	ال و ا	TOTASCOUTAIN	19 (0 (2)

Peronedyidae PERONOSPORALES Perophoridae Petasidae Petromyzonidae PETROMYZONIFORMES Petromyzonini Petricolidae PEZIZALES PHACIDIALES Phaeocapsaceae PHAEOPHYCEAE Phaeothamnionaceae Phalacrocoracidae PHALLALES Phaelostothidae PHALLALES Phallostothidae PHALLOSTETHIFORMES (Pharyngognathi, Malacopterygii) Phasianidae Philinidae (Phinidae) Phocidae Phoenicopteridae Pholidae Pholidae Pholidae Pholidae Pholidae Photocorynidae Photocorynidae Phractolaemidae Phractolaemidae Phractolaemidae Phractolaemidae Phryllophoraceae Phyllophoraceae Phyllophoraceae Physlae Physidae Picidae	5,62 (2) 6,59 (2) 1,58 (2) 1,58 (3) 1,58 (3) 1,66 (3) 1,09 (3) 1,09 (3) 1,09 (3) 1,71 (11) 4,28 (2) 1,96 (4) 1,22 (2) 1,22 (2) 1,22 (2) 1,22 (2) 1,22 (2) 1,22 (2) 1,22 (2) 1,23 (3) 1,71 (8) 8,11 (15) 7,17 (8) 8,25 (1) 1,27 (15) 7,17 (8) 8,26 (12) 1,27 (15) 1,28 (12) 1,29 (12)	PLASMODIOPHORALES (Platacidae) Platacini Platanistidae PLATYHELMINTHES Platycephalidae (Playrhinidae) Platysternidae Plecoglossidae PLECOPTERA (Plecostei) (Plectognathi) Plesiopidae Plethodontidae Pleurobrachiidae Pleurocapsaceae PLEUROCAPSALES Pleuroceratidae Pleuronectidae Pleuronectidae PLEURONECTINI PLEURONECTINI PLEURONECTINI PLEURONECTOIDEI Pleurophoridae Plocamiaceae Plotosidae PlumBAGINALES PODAXALES PODOCOPA Podolampaceae Poeciliini (Poecilioidei) Poeciliopsini Poecilopsettini POGONOPHORA (Polyacanthidae) Polyacanthidae) Polyacanthidae Polycapicae Polycapicae Polycapicae Polycapicae Polycapicae Polycapicae Polycapicae Polychaeta	8,24 1,70(49) 4,223(1) 6,28 (3) 1,78 (3) 1,78 (5) 1,78 (5) 1,705 (1) 1,88 (5) 1,705 (1) 1,88 (5) 1,88 (7) 1,88 (1) 1,88 (1) 1,98
(Plagyodontidae)	1,32 (7)	Polyodontidae Polyphemidae	2,05 (7)
Planariidae	6,24 (1)	POLYPLACOPHORA	3,03
Planorbidae	3,13 (3)	Polypteridae	1,16 (1)
Plantaginaceae	9,86 (3)	POLYPTERIFORMES	1,16

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(Polytomidae) Pomacentridae Pomadasyidae Pomatomidae Pontederiaceae Pontellidae Porcellanidae (Porcidae, Mystidae Porichthyini PORIFERA Porphyridiaceae Portunidae Potamobiidae Potamogetonaceae Potamotrygonidae Prasiolaceae PRASIOLINEAE Priacanthidae PRIMATES Primulaceae PRIMULALES PRIONODESMACEA Pristidae Pristolepidae PROPOGENATE	7,03 /part7 1,70(62) 1,70(36) 1,70(20) 9,44 (1) 2,10 (5) 2,29(24) 1,41 (8) 1,93 (1) 6,13 7,82 (2) 2,29(16) 9,43 (6) 1,10 (6) 7,09 (1) 7,09 1,70(11) 4,29 9,83 (1) 9,83 3,16 1,10 (2) 1,09 (2) 1,70(55)	PSILOTALES PSITTACIFORMES PSOCOPTERA Psychrolutidae PTENOGLOSSA (Pteraclidae) PTERIDOPHYTA Pteriidae (Pterobranchia) (Pteropsaridae) Pterospermaceae Pterottrissidae PTERYGOTA Ptilichthyidae Ptilichthyidae Ptilogonatidae Ptychobothriidae Ptychoderidae Pulmonata Pulvinulariaceae Punctariaceae PychnogonIDA (Pygidiidae) Pyramidellidae Pyrosomatidae PYTHIALES Pyuridae	op.	9,12 5,71 6,74 1,78(18) 3,09 1,70(27) 9,11 3,16 (6) 5,93 1,70(80) 7,33 (3) 1,21 (4) 6,68 1,71(14) 5,79(17) 6,30 (5) 5,92 (1) 3,12 7,72 (9) 6,63 1,41(25) 3,09 (1) 7,72 (9) 6,63 1,41(25) 3,09 (1) 7,96 (1) 8,39 (9)
PROBOSIDAE Procellaridae PROCELLARIIFORMES Processidae PROCOELA Proneomeniidae Pronoctilucaceae (Pronoctilucidae) Prorocentraceae PROSOBRANCHIATA PROTEALES PROTEIDA Proteidae Protecephalidae Protoceratiaceae PROTOCILIATA Protopteridae Protosiphonaceae PROTOZOA PROTURA Prymnesiaceae Psettidae Psettodidae Psettodidae Psettodidae Psettodidae Pseudocumidae Pseudoplesiopidae Pseudosphaeriaceae Psilocephalini Psilorhynchini	4,13 5,61 (2) 5,61 2,28(12) 5,11 3,02 (2) 7,66 (1) 7,63 (1) 3,06 9,64 5,04 5,04 (1) 6,30 (2) 7,67 (4) 6,10 1,14 (2) 7,17 (1) 6,00 6,67 7,32(11) 1,82 2,21 (5) 1,82 2,21 (5) 1,89 (3) 1,40 (2)	RACHIGLOSSA Rachycentridae Rajidae RAJIFORMES Rallidae Ranicipitini Ranidae Ranunculaceae Regalecidae Regulidae REPTANTIA REPTILES, GEN. REPTILES, MISC. REPTILES, MISC. REPTILIA Retropinnidae Rhabdoniaceae Rhachianectidae (Rhachycentridae) RHAMNALES Rhamphichthyidae (Rhamphocottidae) RHEIFORMES (Rhegnopteri) Rhineodontini (Rhinidae) Rhinobatidae		3,09 1,70(22) 1,10 (4) 1,10 5,67 (2) 1,48 (4) 5,12 (1) 9,70 (1) 1,55 (1) 5,79(14) 2,29 5,47 5,30 5,49 5,30 1,23(10) 7,87 (7) 4,23 (1) 1,78 (1) 1,78 (1) 1,78 (1) 1,78 (1) 1,10 (1) 1,10 (1)

Rhinochimaeridae RHIZOCEPHALA Rhizochrysidaceae Rhizophyllidaceae RHIZOPODA Rhodomelaceae RHODOPHYCEAE Rhodophyllidaceae RHODYMENIALES RHOEADALES RHOEADALES Rhombini (Rhombosoleidae) Rhombosoleini Rhyacichthyini RHYNCHOCEPHALIA Ricciaceae Rissoellaceae Rissoellaceae Rissoidae Rivulariaceae RODENTIA ROMALES ROTATORIA RUBIALES RUTILATIOIDEAE Saccobranchidae Saccopharyngidae SACCHAROMYCETALES Saccobranchidae Salamandridae Salamandridae Salamandridae Salamandridae Salamopercae) (Salmopercae)	1,12 (2) 2,16 7,32(12) 7,86 (7) 6,03 7,88 7,88 7,88 1,88 7,88 1,88 1,88 1,77 1,88 1,88	Scapanorhynchini Scaphandridae Scaphirhynchini SCAPHOPODA Scaridae Scatophagidae Schilbeidae Schilbeidae Schindleriidae Scheuchzeriaceae (Schizomycetes) (Schizomycetes) (Schizomycephyta) Sciaenidae SCITAMINEAE SCLERODERMATALES (Sclerodermi) Scomberesocidae SCOMBERESOCOIDEI Scombridae SCOMBERESOCOIDEI Scombropidae SCOPELIFORMES (Scorpaenichthyidae) Scorpaenidae SCOPELIFORMES (Scorpaenidae SCORPIONIDA Scutellidae SCUTIBRANCHIATA (Scyhophori) Scyliorhinidae SCYLIORHINOIDEI Scyllaeidae SCYLIORHINOIDEI Scyllaeidae Scyllaridae (Scylliidae) Scymnorhinini SCYPHOZOA Scytalinidae Scytonemataceae Sebdeniaceae Sebdeniaceae Sebdeniaceae	3,11(12) 2,29(15) 1,08 (1) 1,09 (1) 6,18 1,71(18) 7,95 (5) 7,87 (3) 6,50 9,15 7,06 (5)
(Salmopercae)	1,59	Selenastraceae	7,06 (5)
(Salmopercae) Salviniaceae	1,59 9,25 (2)	(Selenichthyes)	1,53 3,17(13)
(Samaridae)	1,83 (2)	Semelidae Sepiidae	3,21 (2)
Samarini	1,83 (2)	Sepiolidae	3,21 (3)
SANTALALES	9,65	Sergestidae	2,28 (7)
SAPROLEGINALES	8,37	(Seriolidae)	1,70(23)
SARCODINA	6,02 7,80 (4)	SERPENTES	5,35 6,50 (8)
Sargassaccae SAURIA	5,34	Serpulidae Serranidae	1,70 (2)
(Sauridae)	1,32 (1)	Serrivomeridae	1,44 (1)
Saxicavidae	3,17(18)	Sertulariidae	6,17 (1)
Scalpellidac	2,13 (1)	Sichistiidae	1,70(46)

Sididac	2,05 (1)	SQUALIFORMES	1,09
Siganidae	1,73 (3)	Squalini	1,09 (1)
SIGANOIDEI	1,73	SQUALOIDEI	1,09
Sillaginidae	1,70(15)	Squamariaceae	7,86 (8)
		-	
Siluridae	1,41 (7)	SQUAMATA	5,33
SILUROIDEI		Squatinidae	1,09 (3)
Simencholyidae	1,43 (3)	SQUATINOIDEI	1,09
SIMPLICIDENTATA	4,16	Squillidae	2,25 (1)
SIPHONALES	7,17	STEGOCEPHALIA	5,01
Siphonodentaliidae	3,04 (2)	(Steinegeriidae)	1,70(27)
(Siphonognathidae)	1,70(64)	STEMONITALES	8,26
Siphononemataceae	7,93 (4)	Stephanoberycidae	1,60 (1)
SIRENIA	4,14	STEPHANOBERYCIFORMES	1,60
Sirenidae	5,06 (1)	Stephidae	2,10(31)
Sisoridae	1,41(13)	Sternarchidae	1,39 (2)
Sittidae	5,79 (1)	Sternoptychidae	1,25 (2)
Skeneidae	3,10 (6)		1,39 (2)
	3,10 (6) 1,83 (3) 1,83 (3)	Sternopygini	1,71(10)
Soleidae	1 93 (3)	Stichaeidae	7,96 (5)
Soleini	1,83 (3)	Stigonemataceae	7,90 ())
Solemyacidae	3,16 (3)	STIGONEMATALES	7,96
Solenidae	3,17(16)	Stilbiscini	1,43 (8)
Solenognathini	1,51 (6)	Stiliferidae	3,09(16)
Solenoideae	7,42 (2)	STOMATOPODA	2,25
Solenostomidae	1.51 (5)	Stomiatidae	1,25 (3)
Solieriaceae	7,87 (5)	STOMIATOIDEI	1,25
SOLPUGIDA	6,59	STREPSIPTERA	6,85
Soricidae	4,03 (2)	Streptocephalidae	2,02 (1)
SPADICIFLORAE	9,50	Strigeidae	6,27 (2)
Sparidae	1,70(39)	STRIGIFORMES	5,72
(Sparisomidae)	1,70(65)	Stromateidae	1,76 (3)
Spermatochnaceae	7,72 (7)	STROMATEOIDEI	1,76
SPERMATOPHYTA	9,30	Strombidae	3,10(16)
Sphacelariaceae	7,78 (1)	Strongylocentrotidae	6,93 (2)
SPHACELARIALES	7,78	Struthiolariidae	3,10(24)
Sphaerellaceae	7,03 (2)	STRUTHIONIFORMES	5,52
SPHAERIALES	8,58		5,79(19)
•	7 97/11	Sturnidae	5,96 (8)
Sphaerococcaceae	7,87(11)	Styelidae	6 10 (2)
Sphaeromidae	2,23 (6)	Stylatulidae	6,19 (2)
Sphaeropleaccae	7,10 (1)	STYLOMATOPHORA	3,14
SPHAEROPLEINEAE	7,10	Stylophoridae	1,56 (1)
Sphagnaceae	9,07 (1)	STYLOPHOROIDEI	1,56
SPHAGNALES	9,07	Stypocaulaceae	7,78 (2)
SPHENISCIFORITES	5,58	SUCTORIA	6,12
Sphyraenidae	1,64 (1)	Sudidae	1,32 (5)
SPHYRAENOIDEI	1,64	SUINA	4,09
Sphyriidae	2,10(26)	Sulidae	5,62 (3)
Sphyrnidae	1,08 (3)	(Suridae)	1,07 (3)
(Spinacidae)	1,09 (1)	Surirelloideae	7,43 (7)
Spionidae	5,60 (6)	Syllidae	6,49 (4)
Spiratellidae	3,11 (9)	Symbranchidae	1,68 (2)
Spirulidae	3,21 (1)	SYMBRANCHIFORMES	1,68
Splachnidiaceae	7,72 (8)	(Symbranchii)	1,68
Spongiidae	6,15 (1)	Symbranchini	1,68 (2)
SPOROCHNALES	7,75	SYMBRANCHOIDEI	1,68
		\$	
SPOROZOA	6,05	Synanceidae	
Squalidae	1,09 (1)	SYNANDRAE	9,91

Synaphobranchidae (Synapturidae) Synchaetidae (Synchiridae) (Synentognathi) Syngnathidae SYNGNATHIFORIES SYNGNATHOIDEI Synodidae Synodontidae (Synodontidae) Synoicidae Synuraceae	1,43(18) 1,83 (3) 6,37 (1) 1,87(13) 1,47 1,51 (6) 1,51 1,51 1,32 (1) 1,41(20) 1,32 (1) 5,96 (1) 7,32 (7)	Thallochrysidaceae Tharybidae THECATALES Theraponidae THORACICA Thoreaceae Thraupidae Thunnidae THUNNIFORMES Thunnini Thymallidae Thyphaceae THYSANOPTERA THYSANURA	7,34 (3) 2,10(32) 7,63 1,70 (4) 2,13 7,84 (6) 5,79(23) 1,80 (1) 1,80 1,80 (1) 1,23 (2) 9,51 (1) 6,78 6,67
Tachidiidae (Tachysuridae) TAENIOGLOSSA (Tachiosomi) Talitridae Talpidae TANAIDACDA Tanaidae TAPHRINALES TARDIGRADA TARSIOIDEA (Tectospondyli) TELEODESMACEA Tellinidae	2,10(16) 1,41 (2) 3,10 1,55 2,24 (4) 4,03 (1) 2,22 2,22 (1) 8,53 6,63 4,31 1,09 3,17 3,17(14)	TILOPTERIDALES TINAMIFORMES Tisbidae Tomeurini Torpedinidae TORPEDINIFORMES TOXOGLOSSA Toxotidae Trachichthyidae Trachichthyidae Trachinidae (Trachycorystidae) Trachypteridae TRACHYPTEROIDEI TREMATODES TREMATODES - DICENA	7,73 5,56 2,10(10) 1,57 (7) 1,11 (1) 1,11 3,09 1,70(44) 1,61 (5) 1,70(78) 1,41 (4) 1,55 6,25 6,27
TELOSPORIDIA Temoridae Tendipedidae TENTACULATA (Teraponidae) Terebellidae TEREBINTHALES Terebridae Teredinidae Testudinidae Tethyidae TETRABRANCHIA Tetraponuridae	6,06 2,10 (3) 6,87 (2) 6,21 1,70 (4) 6,50 (3) 9,78 3,09(12) 3,17(20) 5,31 (6) 3,11 (8) 3,20 1,95 (2) 1,76 (2)	TREMATODES - MONOGENA TREMELLALES Trentepohliaceae Triacanthidae Triacanthini Tribonemaceae Trichechidae TRICHIALES TRICHIURIDAE TRICHTUROIDEI Trichodontidae Trichonycteridae TRICHOPTERA	6,26 8,75 7,12 (2) 1,89 (1) 7,24 (1) 4,14 (2) 8,28 1,74 (4) 1,74 1,70(72) 1,41(25) 1,70(82) 6,82
TETRAGONUROIDEI Tetraonidae Tetrasporaceae TLTRASPORINDAE Tetrodontidae TETRODONTOIDEI (Teuthidae) (Teuthidoidea) Thalestridae THALIACEA	1,76 5,66 (1) 7,04 (1) 7,04 1,90 (2) 1,88 1,90 1,73 (3) 1,74 (2) 1,74 2,10(11) 5,97	TRICOCCAE Triglidae Triglini Triodontidae Trionychidae Triphoridae Tristomidae Trochidae Trochidae Trochidae Trochidae Troglodytidae Troglotrematidae TROCONIFORNES	9,68 1,78 (2) 1,78 (2) 1,00 (2) 5,31(11) 3,10(12) 6,26 (3) 6,36 3,07 (4) 5,74 (2) 5,79(11) 6,27 (3) 5,76

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Tryblidiidae Trygonidae Trypanosomidae	3,22 (1) 1,10 (5) 6,01 (1)	(Volvocidae) Vorticellidae	7,03 /part7 6,11 (1)
(Trypauchenidae) Trypauchenini TUBERALES	1,77 (2) 1,77 (2) 8,67	Warnowiaceae	7,66 (5)
Tubificidae TUBIFLORAE TUBULIDENTATA	6,51 (1) 9,86 4,27	Xanthidae XANTHOPHYCEAE	2,29(10) 7,21
TUNICATA TURBELLARIA Turbinellidae Turbinidae	5,94 6,24 3,09 (9) 3,07 (5)	(Xenarchi) (Xenoberyces) Xenocephalidae Xenocongridae Xenophthalmichthyidae	1,59 1,60 1,71 1,23 1,23
Turdidae Turridae Turritellidae	5,79(13) 3,09(14) 3,10(14)	(Xenopteri) (Xenopterygii) (Xiphidiontidae)	1,92 1,92 1,71 (9)
TYLOPODA Typhlosynbranchini	4,10 1,68 (2)	Xiphiidae Xiphisteridae	1,75 (4) 1,71 (9)
Tyrannidae	5,79 (2)	Xiphostomidae XIPHOSURA	1,38 (3) 6,56
Ulmaridae Ulotrichaceae OLOTRICHALES ULOTRICHINEAE	6,18 (1) 7,08 (1) 7,07 7,08	Zanclidae (Zaniolopidae) (Zanobatidae)	1,74 (1) 1,78 (7) 1,10 (3)
Ulvaccae Umbelliforeae UMBELLIFLORAE	7,08 (4) 9,81 (1) 9,81	Zaproridae Zeidae ZEIFORMES	1,71(19) 1,62 (1) 1,62
Umbridae Umbrini	1,24 (2) 1,24 (2)	Ziphiidae Zoarcidae	4,22 (2) 1,71(15)
Unionidae Uranoscopidae UREDINALES	3,16 (5) 1,70(88) 8,73	ZOOMASTIGINA Zygnemaceae	6,01 7,15 (2)
(Urochordata) Urocoptidae	5,94 3 , 14 (2)		
(Urodela) Ursidae	5,03 4,05 (2)		
URTICALES USTILACIMALES	9,62 8,72		
Valoniaceae Valvatidae	7,17 (6) 3,10 (7)		
Varanidae Vaucheriaceae	5,34 (1) 7,17 (9)		
Velellidae Veliferidae	6,17 (·6) 1,54 (1)		
VELIFEROIDEI Veneridae Vermetidae	1,54 3,17(11)- 3,10(15)		
VERTICILLATAE Vireonidae	9,53 5,79(20)		
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Anguilla			581090				
Anodonta			580717			580959,	
Anomia			581039			58 1 008,	
Anoplopoma			581110			581033,	
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Arbacia			581175	CUMACEA			581094
Arca			581039	Cymatogaster			581149
Ariosoma		700011	580989	CYPRINIDAE	~~~~~	70.000	580993
Ascophyllum Asellus		580814,	580815 580917	Cyprinus	580885,	580909,	580910
Asterias			580688				
Atrina Australorbis			580963	Dactylogyrus			580877
				Danio			580760
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BACILLARI OPHYC.	E'AE'	580764,	1	Decapterus			581049
BACTERIA			580872	Dendraster			581182
Bacterium			581152	Dermocystidi			580833
Balanus		580764,		<i>DI BRANCHI A</i>	580939,	580942,	
Bilharziella			531038	Donax			581166
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Bugula			581181	ECHINODERMAT.	4		580757
				ECHINOIDEA		580766	
Calanus			581086	ELECTROPHORU.	5'		580719
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Carcharodon			580990	Escherichia			580907
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Glycera			580808	Lutjanus			580822
TT 2			500004	Lysiosquilla			581176
Hadropterus			580924	Lysmata			581130
Helobdella			580918	ila ata-			E0110F
Hemi centrotus			580759	Mactra			581125
				Makaira		£00000	580921
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V:PTTCODUOD# 7	יחסיינא יישדים	TATA	591117	Dama Zioktkua		520001	501000
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Pandalus		580819,		Schistosoma			580963
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ER: 3m

Scirpus Scoliodan Scomber Scomberomorus SCOMBRIDAE SCYLIORHINOIDER Sennia Sepia Septosaccus SERGESTIDAE SERPULIDAE Siboglinum Sillago Silundia Sphaerium Spheniscus Sphyrna Sphyraena Spirogyra Sterna Stolephorus		581127,	581026 581049 581132 581049 580787 581082 581115 581127 581062 580930 581006 580804 581032 580877 581154 580812 581049 581049 581049 580718 580718
Tanichthys Tapes Tetrapturus THORACICA Thunnus THUNNIFORMES Tinca Tilapia Torpedo Trachurus TREMATODES MONO Trinectes Tripneustes Trudis TUNICATA Tylosurus	580723, 581015, OGENA	580957,	580760 581113 580921 580919 581083 580956 581111 580756 581061 581155 581127 580840 580992 581079 581032 581006 581049
Uca Urosalpinx			580762 581178
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Pitkänen, H. (1957) Fisk.Tidskr.Finl., 64:171-5 Troolipyynti Suomessa (Trawli Finland) Development of trawling fleet in its use and catch results & notes new small pelagic trawl.	Finland,	Wikgren, Bo-J. (1957) Fisk.Tidskr.Finl., 64:180-3 Eräs miclipidekysoly. (A quest on opinions) Analysis of the answers on a questionnaire on various question concerning fishing conditions & fisheries management in Finland.	
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Bulanzhe, Yu.D. (1957) 5818 J.Acad.Sci.U.R.S.S., 27(1):55 Coordination of research in the progra of the International Geophysical Year	Zool.Zh., 36(1):151-7
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Stoker, J.J. (1957) Interscience Fublishers, New Yor Water waves; the mathematical th	581909 k, 567 p	Copland, S.J. (1957) Proc.Linn.Soc.N.S.W., 82(383):9-10 Australian tree frogs of the genus	08
with applications		All 44 known continental spp. & su of the genus Hyla are dealt with purely systematic way, but an attenda been made to indicate at least interesting & important notes on a colour in life, breeding habits & matters not directly bearing on the present approach.	in a cmpt t ccology, other
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Somorville, G.M. & L.M. Dickie (1957) Circ.Atlant.biol.Sta., (30):4 p. Offshore scallop explorations -	581910 1957	Kostovon, H.L. (1957) Proc.Linm.Soc.N.S.W., 82(383):117: On the development of the crocodiskull	581913 -24 lian
Prospecting by BARBARA JO for Planagollanicus Gmelin off Nova Sec (St. Pierre, Sable I, & other ba	otia	A description of an early, nearly complete, chondrocranium is present attention drawn to the absence basitrabecular process.	ntod
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Wise, J.P. (1957) Ros.Rop.U.S.Fish.Sorv., (50):13 Growth rate of Browns Bank hadde	581911 P• ock	Trantor, D.J. (1957) Aust.J.Sci., 19:230-1 Poarl culture in Australia	581914
Determination of growth parameter back-calculation for scale measured market & research vessel sample 1942-54.	uroments	Description of the implantation technique with illustration of instruments used, & preliminary account of experimental results.	
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O'Gower, A.L. (1957) 581915 Proc.Linn.Soc.N.S.W., 82(384):240-4 The influence of the surface on oviposition by Aödes acgypti (Linn.) (Diptora, Culicidae)

Proforence for a free water surface was more important than low reflectance or rough texture in determining the attractiveness of an oviposition site.

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Russell, F.S. (1957) 581916

J.Mar.biol.Ass.U.K., 36:445-7

On a new medusa, <u>Krampella dubia</u> n. g., n. sp.

A descriptive note of the sp.

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Cornor, L.D.S. & B.W.

Sparrow (1957)

J.Mar.biol.Ass.U.K., 36:459-72

The modes of action of toxic agents. II.

Factors influencing the toxicities of mercury compounds to certain crustacea

A study of the toxicities of mercuric chloride, mercuric iodide & methyl-, ethyl-, n-propyl-, n-butyl, n-amyl-, iso-propyl-, iso-amyl-, & phenylmercuric chlorides to larvae of the crustaceans Artemia salina & Elminius modestus.

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Mason, J. (1957) 581918

J.Mar.biol.Ass.U.K., 36:473-92

The age and growth of the scallop,

Pecten maximus (L.), in Hank waters

Growth-rings on the shell of the scallop (Pecten maximus) are laid down annually, in spring, & so can be used to determine the age. Scallops grow from spring to December, & cease growing in winter; possible causes of the annual cessation of growth are discussed.

Boalch, G.T. (1957) 581919 J.Mar.biol.Ass.U.K.; 36:519-28 Marine algal zonation and substratum in Beer Bay, south-east Devon

The intertidal zonation was examined in relation to substratum by means of plane table maps & transects. The dominance of Ulva lactuce on colonies of the reof-building worms Sabellaria alveolata was noted, but the distributions of Fucus vesiculosus, F. serratus, Gigartina stellata & Interemental spp. showed no correlation with substratum.

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Nicol, J.A.C. (1957) 581920 J.Mar.biol.Ass.U.K., 36:529-38 Spectral composition of the light of polyhoid worms

The spectral composition of the light of 4 spp. of polynoid worms has been measured, viz. Harmothoë longisetis, Gattyana cirrosa, Polynoë scolopendrina & Lagisca extenuata. The method involved the use of coloured spectral filters & 2 multiplier phototubes.

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Shelbourne, J.E. (1957) 581921 J.Mar.biol.Ass.U.K., 36:539-52 The feeding and condition of plaice larvae in good and bad plankton patches

Considers the development stages of the plaice, comparative abundance of plankton, diet of plaice larvae and the condition of transition stage larvae on a study of the problem of early mortalities of food fishes.

Hart, T.J. (1957) 581924

J.Mar.biol.Ass.U.K., 36:593-7

Notes on practical methods for the study of marine diatoms

Notes on mothods of cleaning & mounting marine frustules.

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Froman, F.H. & F.H. Riglor (1957) 581922 J.Mar.biol.Ass.U.K., 36:553-67 The responses of Scrobicularia plana (Da Costa) to osmotic pressure changes

The results of measurements of the osmotic pressure of the blood of the sp. when exposed to diluted sea water, & observations made on the behaviour of the animal when exposed to solutions of different osmotic pressure are discussed & referred to other lamellibranchs & other animals that respond to osmotic pressure changes.

Kabata, Z. (1957) 581923

J.Mar.biol.Ass.U.K., 36:569-92

Lornacoccra obtusa n. sp., a hitherto undescribed parasite of the haddock (Gadus aeglefinus L.)

The fishes harbouring parasites of the genus Lernacocera can be divided, according to the presence or absence of contact with the coastal waters, into inshore & offshore groups. L. branchialis parasites on cod & whiting distributed mainly in the coastal area & L. obtusa 1. sp. parasites on haddock in offshore waters.

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Naylor, E. (1957) 58192 J.Mar.biol.Ass.U.K., 36:599-602 The occurrence of Idotea metallica Bose in British waters

Gives specific characteristics & geographical distribution of the sp.

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ii. Whitear (1957)
J.Mar.biol.Ass., 36:603-28
Receptor elements in the coxal region
of decapoda crustacoa

In the 4th to 8th theracic segments of decaped crustacea, at the bases of the peracopeds, sensory organs of various kinds have been found. They have been observed in Homarus vulgaris, Astacus astacus, Palinurus vulgaris, Eupagurus bernhardus, Carcinus macnas, Maia squinado & described in greater detail for Homarus, Carcinus & Maia.

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Ireland is described in detail, based on
recent ecological surveys & critical
examination of all past records.

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Rood, R.J. (1957) Copcia, (4):286-90 Phases of the life history of the Rosyface shiner, Notropis rubellus, in Northwestern Pennsylvania Contains information on habitat, feeding behaviour, food preferences & growth rate & sex ratio.	Ward, J.W. (1957) 581936 Copeia, (4):295-8 The reproduction and early development of the sea catfish, Galeichthys felis, in the Biloxi (Mississippi) Bay Deals with a study of the natural history, reproduction, cleavage & early embryology of the sp.
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Lagler, K.F. & C. 581934 Steinmetz, Jr. (1957) Copcia, (4):290-2 Characteristics and fertility of experimentally produced sunfish hybrids, Lepomis gibbosus L. macrochirus Considers fertility of the F ₁ hybrid, characters of F ₁ compared with those of parent species-stocks, & use of hybrid sunfish in fishery management.	Woods, L.P. (1957) 581937 Copcia, (4):298-9 Boryx splendens Lowe in the Gulf of Mexico Contents as per title.
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Starr, T.J. & W. Fosberg (1957) 581935 Copcia, (4):292-5 Filter paper electrophoresis of serum proteins from sharks A study of the blood serum protein patterns of Scoliodon terrae-novae, Aprinodon isodon, Sphyrna diplana & S. tiburo.	Warburton, B., C. Hubbs A 581938 D.W. Hagen (1957) Copeia, (4):299-300 Reproductive behaviour of Gambusia heterochir Contents as per title.
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Pew, P. (1957) Copcia, (4):300 Occurrence of young delphin, hippurus, in a Texas bay Contents as per title.	581939 Coryphaona	Krumholz, L.A. (1957) Copcia, (4):302 Measurements of a large sharpness mackerel shark, Isurus exyrinchu Bimini, Bahamas Contents as per title.	
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Mentreuil, P.L. (1957) Actualités mar., 1(2):3-5 The American lobster at the Mag Islands Popular account of the biology fishery for Homarus americanus.		Boschwitz, D. (1957) Copcia, (4):310-1 Thyroidless tadpoles of P syriacus Boettger H. Contents as per titlo.	581949
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Ewing, M. & W.L. Donn (1958) 581951 Scionce, 127:1159-62

A theory of ice ages II

Continuation of discussion of a theory that certain local terrestrial conditions caused Pleistocone glaciation relevant to oceanography (prevailing water temperatures) & maritime moteorology.

581954 Hardman, W.H. & G.M. (1957)Southward Rep.int, Pacif. Halib. Comm., (25):22-7 Invostigations of small halibut in September, 1955

Account of exploratory voyage of trawler PHYLLIS CARLYLE. Maps of area studied, length composition & stomach contents of catches of Hippoglossus stenolepis using fine meshed gear, species distribution of catches, haul by haul.

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Komai, T. (1958)

Scionce, 127:1327 Tatuo Aida, geneticist 581952

Obituary & short biography of Japanese geneticist well-known for his studies of the freshwater fish Oryzias (Aplochoilus) latipos.

581955 Anonymous (1957) Nature, Lond., 180:465-6 Association of island marine laboratories

Note on the establishment of this organization by an international conference held April 1957 at Maguey, Puerto Rico, of representatives of laboratories on islands in coral-reel area of tropical West Atlantic.

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581953 International Pacific Halibut Commission (1957)

Rop.int.Pacif.Halib.Comm., (25):5-21 Regulation and investigation of the Pacific Halibut Fishery in 1956

Gives outline of historical background & reports on activities under leadings: rogulations, statistics, catch per unit fishing offort, multiple open seasons, composition of catches, growth rate studies, tagging experiments, studies of sub-commercial sized halibut. Gives an appondix by W.H. Hardman & G.M. Southward (581954).

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Moonan, J. & D.A. Webb (Ed.) (1957)581956 Comm.brit.Ass.Advancoment of Science,

Dublin, 254 p. A view of Ireland

Incl. articles by M. de Valera & H.M. Parkes on marine algal flora of the country, by A.E.J. Went on inland fish & fisheries, C.F. Humphries & P.G. Kennedy on general fauna, cach with a bibliography.

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Anonymous (1957) Nature, Lond., 180:488 A view of Ireland Review of 581956.	581957	Eliasson, E. (1957) Nature, Lond., 180:512-3 Right-ventricle pressures and herate in diving birds Experimental study of physiology fish-eating birds at Runde, West Norway.	of
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The abyssal circulation of the ocean

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Enigmonia aenigmatica Soworby, a motile anomiid (Saddle oyster)

A short review of the papers presented on the symposium.

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North Pacific albacoro tuna exploration by the M/V JOHN N. COBB - 1956

Exploration of waters of the north-castern Pacific from northern California

Reviews the contributions presented at the symposium on "Systematics of To-day" held as part of the celebrations. The papers dealt with spp. of fish, molluses, algae, plants & other organisms.

eastern Pacific from northern California to southern British Columbia, extending out more than 800 miles offshore, fishing with gill nets & albacoro trolling gear. The cruise plan, gear & fishing methods are described. Catch results are given & discussed with respect to albacore size, & relation with water temporature.

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A list of spp. collected with information on their distribution, occurrence & abundance. Also lists the stations, time & depths of sampling.

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On the stability of fishing vessels

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Quantitative & qualitative distribution of phyto- & zoo-plankton. Quantitative distribution within depth given.

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Social Affairs (1957)
In "New sources of energy and economic development", by U.N. Department of Economic & Social Affairs, New York, Pt.2: 63-75
Tidal energy

Review of present status of knowledge of this subject; characteristics of tides; utilization techniques; prospective development & recommendations to effect this. Short annotated bibliography on pp. 146-9 of same volume.

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U.N. Dopartment of Economic & 582093
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In "New sources of energy and economic development", by U.N. Department of Economic & Social Affairs, New York, Pt. 2: 99-115
Thermal energy of the seas

Roview of present state of knowledge of this subject; utilization techniques; geological factors; economic factors; prospective development (availability of sites, natural & technological factors) & recommendations for effecting this. Short annotated bibliography on p. 150 of same volume.

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Oystercatchers (Haematopus ostralogus) as posts of cocklo and mussel bods

Summarizes the results of investigations already made of the feeding of oyster-catchers, & describes the methods employed in studying the problem.

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582101 Lundbock, J. (1957) Jbor.dtsch.Fisch., (1956):121-51 Biologisch-statistischer Bericht über dio deutscho Hochsecfischerei im Jahre 1956 (Biological-statistical report on the German high-sea fishery in the year 1956). In

Catches & landings by spp., fishing grounds & seasons; fishing offort & general fishing conditions during the year.

582104 Bückmann, A. (1957) Jbor.dtsch.Fisch., (1956):192-6 Die Arbeiten der Deutschen Wissenschaftlichon Kommission für Mooresforschung (The work of the German Scientific Commission for marine investigations).

Review of the work of the Commission in 1956.

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Ebeling, G. (1957) 582102 Jbcr.dtsch.Fisch., (1956):166-76 Der Einsatz der Fischereischutzboote FRITHJOF und MEERKATZE sowie des Fischereiforschungsschiffes ANTON DOHRN im Jahro 1956 (Activities of the fisheries protection vessels FRITHJOF & MEGRKATZE as well as of the fisheries research vessel ANTON DOHRN in the year 1956). En

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582105 von Brandt, A., H. Mann & Chr. Honnings (1957) Jbor.dtsch.Fisch., (1956):197-239

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Activities of the weather stations on board; frequency of gales on the fishing grounds of the North Atlantic & relation of the frequency of gales to the fish landings.

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Short review of the Gorman logger fishery for herring in 1956.	is any is in the second of the	Roview of landings & fish trades of various countries of the world during 1956.
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582113 Carpelan, L.H. (1957) Ecology, 38:375-90 Hydrobiology of the Alviso salt pends

Physico-chemical characteristics & fauna & flora of ponds bordering San Francisco Bay, California, where former salt-marsh has been reclaimed for salt production by solar evaporation of soa-water.

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Harris, E.K. (1957)

Further results in the statistical

Formula proposed for computing variance

of number of spp. in independent sets

of samples, applied to observations of macro-invertebrate fauna in 6 areas of

a stream in Ohio. Development of method described by Gaufin, A.R., I.K. Harris & H.J. Walter (1956) in Ecology, 37:

analysis of stream sampling

Ecology, 38:463-8

582116

Swindalo, D.N. & J.T. Curtis (1957) 582114 Ecology, 38:397-407 Phytosociology of the larger submerged plants in Wisconsin lakes

Solection of lakes for comparative study: sampling methods & devices; definition & description of the communities; seasonal succession & ordination; correlations with environmental factors. Important gonera were Juneus, Eleocharis, Najas, Chara, Potamogeton, Myriophyllum, Coratophyllum, Sagittaria, Isoctos, Ranunculus, Vallisnoria, Megalodonta, Elatine, Gratiola & Eriocaulon.

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Martof, B.S. (1957) 582117 Icology, 38:494-501 The food of the salamander Leurognathus

Stomach contents of L. marmorata, inhabiting swift mountain streams in Georgia, U.S.A., included insects, decapods, arachnids, algae & gastropods, Comparison with food of Desmognathus quadramaculatus & with abundances of availablo food in sampled streams.

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Proctor, V.W. (1957) 582115 Icology, 38:457-62 Some controlling factors in the distribution of Haomatococcus pluvialis

Growth of this motile groon alga, which occurs in ophomoral rainwater pools but not pormanent pools, is inhibited by an extracollular toxic substance associated with algal blooms & shown experimentally , to be produced by cultures of Chlamydomonas & Sconodesmus.

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Wohlschag, D.H. (1957) 582118 Ecology, 38:502-10 Differences in metabolic rates of migratory and resident freshwater forms of an arctic whitefish

Experimental work to find an explanation of the occurrence & ecological significance of the 2 forms of Corogonus sardinella found near Peint Barrow, Alaska, Oxygen consumption (respiratory) rates were measured with regard to bedy weight, temperature & activity. The statistical problems of this work & tho ocological significance of the results aro discussed. WE GLK:glk

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Frank, P.W. (1957) 582119 Ecology, 38:510-9 Coactions in laboratory populations of two species of Daphnia In an earlier study (Frank, 1952) it was observed that members of 2 genera of Cladocera did not coexist under the experimental conditions provided; in isolation from each other they sustained relatively high densities. Present investigation attempts to apply similar regime to 2 spp. more likely to compete in nature, D. magna & D. pulicaria.	Griffith, R.J. (1957) 582122 Ecology, 38:538-40 A portable apparatus for collecting horizontal plankton samples A portable apparatus for collecting horizontal plankton samples & operational technique in using it to collect oyster larvae is described. The unit uses a small gasoline-powered pertable pump mounted on a skiff.
GLK: sjh F	GLK:tl MF
Sutcliffe, W.H., Jr. (1957) 582120 Ecology, 38:526-9 Observations on the growth rate of the immature Bermuda spiny lobster, Panulirus argus Data obtained from: 1) specimens held in aquaria & measured for increase in carapace length after moulting, & 2) specimens recently brought in from the field. The effect of laboratory conditions was examined. Growth rate is related to sexual development & to temperature.	Löve, A. (1957) 582123 Ecology, 38:543-4 The living landscape in Sweden Review of original printed in Swedish by Sclander, S. (1955), Albert Benniers Förlag, Stockholm, 485 p.
GLK: glk M	GLK: MF
Odum, E.P. (1957) 582121 Ecology, 38:531-5 The ecosystem approach in the teaching of ecology illustrated with sample class data Detailed discussion of studies of a small pend in the teaching of ecology.	Löve, A. (1957) 582124 Ecology, 38,545 Scandinavian ecology Review of original printed in Swedish by Sjörs, H. (1956), Scandinavian Univ. Books, Helsingfors, 229 p.
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582125 Moylo, J.B. & D.R. Franklin (1957) 582128 Bates, M. (1957) Trans. Amer. Fish. Soc., 85:28-38 Doology, 38:548 Quantitative creel census on 12 Parasite ecology Minhosota lakes Review of 'Parasites and parasitism', by Cameron, T.W.M., 1956, Wiley & Sons, Description of a sampling technique for large lakes with numerous public access New York, 322 p. points. Also a summary & comparison of the census results with a discussion of reliability of census methods. WAD:tjj F GLK: MF Springer, S. (1957) 582126 Funk, J.L. (1957) 582129 Trans. Amer. Fish. Soc., 85:13-7 Trans. Amer. Fish. Soc., 85:39-57 Tuna resources of the tropical and sub-Movement of stream fishes in Missouri tropical Western Atlantic Analysis 846 recovery reports of tagged Lists spp. & briefly discusses their fish to determine the movement pattern abundance in the Gulf & Caribbean & the of 14 spp., each sp. including a means of exploitation. scdentary group & a mobile group. WADstjj F M WAD:tjj Jenkins, R.M. (1957) 582130 Clemens, H.P. & J.C. 582127 Trans. Amer. Fish. Soc., 85:58-74 Finnell (1957) The effect of gizzard shad on the fish Trans. Amer. Fish. Soc., 85:18-27 population of a small Oklahoma lake Biological conditions in a brinepolluted stream in Oklahoma Estimates of the standing crops in 2 lakes, one with & another without The average numbers of 34 kinds of gizzard shad, by short-period, organisms throughout the year in various simultaneous, mark-and-recovery method chloride concentrations ranging from with wire traps, checking the lake with 20.000 p.p.m. to 100 p.p.m. are shad by the use of rotenone, are analysed indicated.

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to determine the effect of shad on

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Contrarchids.

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Parsons, J.W. (1957) 582131 Trans.Amer.Fish.Soc., 85:75-92 The treut fishery of the tailwater below Dale Hollow reservoir

On the basis of percentage of stocked fish angled & of growth rates of creeled fish, the annual stocking requirements are estimated.

Caldwell, D.K. & al. (1957) 582134

Trans. Amer. Fish. Soc., 85:120-34

Populations of spotted sunfish and

Florida largomouth bass in a constanttemperature spring

Scale & morphometric studios on growth with an attempt to correlate the latter with seasonal changes in light intensity & productivity.

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Donaldson, L.R. & P.R. 582132
Olson (1957)
Trans.Amer.Fish.Soc., 85:93-101
Development of rainbow trout brood stock
by soloctive breeding

Describes methods and results of 23 years work with Salmo gairdneri to improve growth rate, earlier maturity, tolerance to warm water temperatures, resistance to disease & egg production.

Fry, F.A.J. & K.A.F. Watt (1957) 582135 <u>Trans.Amer.Fish.Soc.</u>, 85:135-43 Yields of year classes of the smallmouth bass hatched in the decade of 1940 in Manitoulin island waters

Estimation for South Bay, lake Huron, with subsidiary estimates for neighbouring waters are made indicating 1) synchronous fluctuations throughout the district & 2) correlation of yield variation from year classes with algebraic sum of monthly deviations from mean air temporature.

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Eschmeyer, P.H. (1957) 582133 Trans.Amer.Fish.Soc., 85:102-19 The near extinction of lake trout in lake Michigan

History & proof of docline, & analysis of the causative factors.

Scruggs, G.D., Jr. (1957) 582136 <u>Trans.Amer.Fish.Soc.</u>, 85:144-59 Reproduction of resident striped bass in Santee-Cooper reservoir, South Carolina

Discusses exchanges between reservoir populations & those making seasonal runs in lower Cooper River & spawning activities. Sexual maturity is classified on the basis of changes in ratio of gonad to body weight.

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Cope, O.B. (1957) 582137

Trans.Amer.Fish.Soc., 85:160-79

Six years of catch statistics on

Yellowstone lake

Part of an investigation on status of cutthroat trout. Development & use of methods for estimating numbers of fishermon, hours of effort & catch are described.

Olson, P.A. & R.F. Foster (1957) 582140 Trans.Amor.Fish.Soc., 85:203-7 Tomperature telerance of eggs and young of Columbia river chinook salmon

Studies of a race of fall spawning Oncorhynchus tshawytscha

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Hooper, F.F. & A.R. 582138
Grzenda (1957)
Trans.Amer.Fish.Soc., 85:180-90
The use of toxaphene as a fish poison

Differences in toxicity in hard & soft waters, in the effect on bluntnesed minnow & aquatic invertebrates & factors affecting rates of detexification & the part of micro-organisms in reducing toxicity are described.

Byrd, I.B. & D.D. Moss (1957) 582141 Trans.Amor.Fish.Soc., 85:208-16 The production and management of Alabama's state-owned public fishing lakes

Doscribes the sites & construction, with details of stocking & management, fishermen trips, number & weight of catch otc. of the 11 managed lakes open to public fishing.

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Maloney, J.E. & F.H. 582139
Johnson (1957)
Trans.Amor.Fish.Soc., 85:191-202
Life histories and inter-relationships
of walloye and yellow perch, especially
during their first summer, in two
Minnesota lakes

The association of young of the 2 fishes which have different growth rates & food habits & possible reasons for differences in fish distribution in the lakes are discussed.

Neuhold, J.M. (1957) 582142
Trans.Amor.Fish.Soc., 85:217-33
Ago and growth of the Utah chub, Gila atraria (Girard), in Panguitch lake and Navajo lake, Utah, from scales and opercular bones

Describes the 2 methods & results, & evaluates them.

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Lennon, R.M. & P.S. Parkor (1957) 582143 Trans. Amor. Fish. Soc., 85:234-40 Electric shocker developments on southcastern trout waters

Doscribes the alternate-polarity clectrode system & its value in softwater streams with high electrical resistivities.

582146 Witt, A., Jr. (1957) Trans. Amer. Fish. Soc., 85:271-9 Soasonal variation in the incidence of Lymphocystis in the white crappic from the Niangua Arm of the lake of the Ozarks, Missouri

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Mraz, D. & C.W. Throinen (1957) 582144 Trans. Amer. Fish. Soc., 85:241-56 Anglor's harvest, growth rate and population estimate of the largemouth bass of Browns lake, Wisconsin

Studies of Micropterus salmoides made as a basis for evaluating the result of liberalized angling regulations & including comparisons of 4 methods of estimating populations.

Millor, R.B. (1957) Trans. Amer. Fish. Soc., 85:300-1 Roport of standing Committee on hydrobiology and fish culture

Briefly touches on methods of increasing production in natural waters under the heads: 1) roclamation of small lakes by poisoning, 2) use of hatchery products, 3) lake & stream improvement, 4) population manipulation, 5) liberalized regulations, 6) limnological research & 7) control of natural mortalitios.

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DeRocho, S.E. & L.H. Bond (1957) 582145 Trans. Amer. Fish. Soc., 85:257-70 The lake trout of Cold Stream Pond, Enfield, Maine

Studies of Cristivomer namayoush: tagging, spawning habits, ogg predation, harvest, ago & growth, mortality, population estimates.

582148 Inglo, R.M. (1957) Proc.Gulf Caribb. Fish. Inst., 9:6-17 Intermittent shrimp sampling in Apalachicola Bay with biological notes and regulatory applications

Considers regulation of the fisheries for Penacus setiferus, P. aztecus, & P. duorarum on the basis of biological investigations.

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Regan, J., C.P. Idyll & 582149
E.S. Iverson (1957)
Proc.Gulf Caribb.Fish.Inst., 9:18-22
Mosh size regulations as a possible method of managing the tortugas shrimp fishery

A study of the effect of different cod and mesh sizes on the size composition of the catch & the escapement of shrimp, & the effect on small shrimp of passing through the cod end.

tyrannus & the development of the biological investigations being made to determine the causes of fluctuations in the fishery & the extent to which they are predictable, are reported.

June, F.C. (1957)

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Bullis, H.R., Jr. (1957) 582150 Proc.Gulf Caribb.Fish.Inst., 9:56-60 Royal red shrimp - a new South Atlantic rosource

A report on the exploratory shrimp fishery carried out on the South Atlantic coast of the United States for Hymenopenaeus robustus. Tabb, D. (1957) 582153
Proc.Gulf Caribb.Fish.Inst., 9:106
Studies on the life history of the spotted sea trout Cynoscion nebulosus (C. & V.)

Proc. Gulf Caribb. Fish. Inst., 9:99-106

The story of the fishery of Breveertia

Biological investigation of Atlantic

Studies of spawning, age, growth, food habits & abundance; relative percentage of the total catch provided by each segment of the fishery - sport hook & line, commercial hook & line & commercial gill netters. Seasonal trends in availability & seasonal migrations.

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Stein, J.E. (1957) 582151

Proc.Gulf Caribb.Fish.Inst., 9:99

The status of scientific knowledge about the red snapper (Lutjanus aya Bloch) and the economic importance of this fishery

Although the red snapper was found to be the 3rd largest fin fishery in the Gulf of Mexico, there was a paucity of scientific information on this animal. Various programs were suggested to fill the gaps of ignorance in order to further develop the industry.

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Bardach, J.E. & D.W. 582154

Monzel (1957)

Proc.Gulf Caribb.Fish.Inst., 9:106-12

Field and laboratory observations on the growth of some Bermuda reef fisheries

A study of growth by following weight increment of marked fish in the field which was compared with weight gains upon saturation feeding of one sp. in laboratory. Growth of Epinophelus guttatus, B. striatus, Mycteroporea bonaci & M. falcata were studied.

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Murdock, J. (1957) 582155

Proc.Gulf Caribb.Fish.Inst., 92112-20

A survey of spearfishing in the Florida

Keys

Discussos fishing effort & landings & mothods of regulation of spearfishing.

Carranza, J. (1957) 582158
Proc.Gulf Caribb.Fish.Inst., 9:145-50
Marine fisheries of the Yucatan
Poninsula, Mexico

A progress report on the investigations carried out since 1954. The zone of study includes the states of Campoche & Yucatan, & the territory of Quintana Roo.

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Storr, J.F. (1957) 582156

Proc.Gulf Caribb.Fish.Inst., 9:120-7

Progress of recovery of the commercial spenge beds of Florida

The problem of recovery of the sponge bods is discussed under the following headings: historical background, present distribution of the sponges in the upper Gulf, sponge productivity, growth rate of the sponges, present distribution related to ocean currents, factors affecting distribution, & probable distribution in 5 & 10 years.

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Wiles, D.W. (1957) 582159
Proc.Gulf Caribb.Fish.Inst., 9:150-3
Developing a Caribbean fishery

Suggests a fishery research programme to be developed by the Federated British West Indies.

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Suaroz Caabro, J.A. (1957) 582157 Proc.Gulf Caribb.Fish.Inst., 9:136-43 The present situation in the fishing industry of Cuba

The fishing industry of Cuba is discussed under the following headings: the shrimp, spiny lebster, shark, tuna, grouper & snapper fishery & imports & experts of fishing products.

Rosa, H., Jr. (1957) 582160

Proc. Gulf Caribb. Fish. Inst., 9:153-70

The survey of living aquatic resources

Describes the work of the Fisheries
Biology Branch of the Fisheries
Division of FAO in connection with the
survey of living aquatic resources of
the world. It presents as tentative
examples, 14 figures illustrating in
synoptic fashion certain features of the
Central Americal Region, & indicates the
lines along which further development
of this work is intended to be made.

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Rao, J. Visweswara (1958) Rawls, O. (1957) J. sci.industr. Res. 16A(1):5-8 Proc.Gulf Caribb.Fish.Inst., 9:171-5 Activities of the Corps of Engineers Hydraulic Engineering Laboratory, Indian Institute of Technology, related to Florida coastal fisheries Kharagpur Discusses the civil works carried out Description of laboratory, its equipment in the Jacksonville District with some & research being carried out there & effect on coastal waters & estuaries. planned for the future, mainly relating to dam design & regulation of water flow & silting in rivers & canals. · F MF FAO:sjh HR:hr 582165 Shaikhmahmud, F. & N.G. Marshall, A.R. (1957) 582162 Proc. Gulf Caribb. Fish. Inst., 9:175-80 (1958)Magar J.sci.industr.Res., 16A(1):44-6 The activities of the U.S. Fish & Wild-Studies in the nutritive value of life Service, Office of River Basin Bombay prawns: Part I - Chomical Studies, in relation to federal watercomposition of prawns use projects and the marine fisheries rescurces of Florida Reports analysis of fats, protein, glycogon, lactic acid, mineral & Stresses the problems of conservation vitamin content of Penacus penicillatus, connected with projects of the Corps Motapenaous affinis, Parapeneopsis of Ingineers in Florida. stylifera, Hippolysmota ensirostris & Leander tenuipes. HRahr MF FAO: sjh Gail, R. & L. Devambez (1958) 582166 Allon, J. (1958) 582163 Toch.Pap.S.Pacif.Comm., (111):17 p. Rosearch, Lond., 11:67-75 Selected annotated bibliography of Hydraulic scale models Trochus (Trochus niloticus, Linn.) Brief ill. survey of the present 25 refs. in alphabetical order of position of the use of scale models in authors' names, with goographical key solving some hydraulic engineering (Australia, India, New Caledonia, Philippine Is., Pacific Is. Trust problems & adding to knowledge of siltation & crosion in river & tidal Territory). Notes on distribution of areas, fluid motion in pipes, the the sp. resistance encountered by ships. M FiB:sjh FAOssih MF

582170 Horobin, G.W. (1957) 582167 Lear, J. (1958) Saturday Rev., N.Y., July 5:35-6 Brit.J.Soc., 8:343-56 The sea within us: an ancestral tale Community and occupation in the Hull fishing industry Popular article on the exploration of the oceans & their natural resources. Socio-economic study of this important English distant-waters fishing port. M ssjh M WADssjh Iselin, C.O'D. (1958) Harder, W. (1958) Saturday Rev., N.Y., July 5:37-41 Bull.interam.trop.Tuna Comm., 2:367-88 The intestine as a diagnostic character Our water planet in identifying certain clupeoids (Engraulididae, clupeidae, dussumieriidae) Popular ill. article on modern and as a morphometric character for oceanographic research. comparing Anchoveta (Cetengraulis mysticetus) populations. Statistics show differences in relation of length of intestine to body length in different stocks of clupeoids in the eastern tropical Pacific & elsewhere. References to genera Etrumeus, Opisthopterus, Odontognathus, Neopisthopterus, Opisthonema, Sardinops, Lile, M Clupea, Alosa, Pomolobus, Lycengraulis, WAD:sjh 582172 Hill, G. (1958) 582168 Saturday Rev., N.Y., July 5:42-3 (Card 2) Seafloor wonder merchant Anchoa, Harengula, Engraulis, Anchoviella. A profile of Dr. Roger Revelle, Director of the Scripps Institution of Oceanography, La Jolla, California.

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Brown, H. (1958) 582173 Saturday Rev., N.Y., July 5:45-6 The research frontier

A popular ill. article on underwater exploration, especially with bathy-scaphes.

Larimore, R.W. (1957) 582170

Bull.Ill.nat.Hist.Surv., 27(1):83 p.

Ecological life history of the warmouth (Centrarchidae)

A detailed study of <u>Chaenobryttus</u> gulosus (Cuvier, incl. a description of habitat, food habits, reproduction, growth, parasitism, behaviour & economic relations.

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Anonymous (1957)

J.sci.industr.Res., 16A:309-10

Algae as a source of fuel

Account of report in Sci.News Lett.Wash. 71:117, (1957) of studies made at University of California of production of gaseous fuel (methane) by control of processes involving growth & decay of pond algae.

Elliott, G.F. (1958) 582177 Publ.biol.Sta., Bergen, (21):5 p. An abnormal lophophore in Macandrevia (Branchiopoda)

Description of a Norwegian specimen of M. cranium; comparison with other records suggests phenomena is a congenital defect.

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Ziporin, Z.Z., H.F. Kraybill & 582175 H.J. Thach (1957) J.Nutr., 63:201-9 Vitamin content of foods exposed to ionizing radiations

Incl. results of gamma irradiation of muscle of haddock.

Van Oosten, J. & H.J. 582178
Deason (1957)
Spec.sci.Rep.U.S.Fish Wildl.Serv.,(229):
63 p.
History of Red Lakes fishery, 1917-38,

History of Red Lakes fishery, 1917-38, with observations on population status

Traces the development of the commercial fisheries of the Red Lakes, Minnesota, from inception in 1917 as a war measure through 1938. Trends of production & catch per unit of effort for the principal spp. with notes on statistics of minor fishes; life history data for the walleye & yellow perch; artificial propagation of walleye & whitefish from 1918 through 1938. WAD: glk

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Larraneta, M.G., J. López & 582179 P. Suau

Invest.pesq., 9:3-25 Composición de los desembarcos en la pesquería de sardina de Castellón (Composition of the landings of the Castillian sardine fishery).

Estimation of the number of sardines landed of each age group by extension of the age-composition of samples of each of three areas in each ten day period during 1948 to 1955, to the catches taken in those areas & periods.

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Margalef, R. (1957)

Invest.pesq., 9:65-95

Variación local e interanual en la secuencia de las poblaciones de fitoplancton de red en las aguas superficialos de la costa mediterránca espanola (Local & annual variation in the sequence of populations on net phytoplankton in the surface waters of the Mediterranean coast of Spain).

Analysis of previously published data giving average monthly values expressing relative abundance of every sp., on the assumption that abundance of Dinoflagellates remained constant throughout the

year. The cycles of abundance & of

changes in composition are discussed.

Figueras, A. (1957) 582180 Invest.pesq., 9:27-31

Datos sobre la edad y crecimiento de la albacora (Germo alalunga, Bonnaterre) (Data on the age and growth of the albacore (Germo alalunga Bonnaterre). En

Age determination on fish of the NW Spanish coast by study of vertebral centra; determination of relation of body length to vertebral radius; comparison with previous results.

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(Card 2)

Rodriguez-Roda, J. (1957) 582181 Invost.pesq., 9:33-64 Crecimiento relativo des atún, Thunnus thynnus (L.), de Barbate (Costa sudatlántica espanola) (Relative growth of the tunny, Thunnus thynnus L. of Barbate (south Atlantic coast of Spain)).

Linear regressions between various body dimensions; length-weight relation; number of rays in the dorsal fin, & number of dorsal & anal finlets.

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Suau, P. & F. Vives (1957) 582184 Invest.pesq., 9:97-118 Contribución al estudio del salmonete de fango (Mullus barbatus L.) del Mediterráneo occidental to the study of the mullet (Mullus barbatus L.) of the western Mediterranean).

Sexual development & sex ratio; varia_ tions in muscular & hepatic fat; age & growth; migrations.

Planas Mestres, J. (1957) 582185 582188 Shewan, J.M. & A.S.C. Invest.pesq., 9:119-28 Ehronberg (1957) J.Sci.Fd Agric., 8:227-31 Estudio sobre el páncreas endocrino del bonito del Norte o albacora, Germo Volatile bases as quality indices of alalunga, Gml. (Study of the iced North Sea cod pancreatic endocrine of the northern bonito or albacore, Germo alalunga, Gml.) Incl. data on composition of Gadus En callarias from North Sea & Icelandic waters. Location of pancreatic endocrine nodules in the liver, their weight, size & shape. Extraction of insulin from the nodules & its bioassay. FAOsglk M FAO: sjh, M Resources for the Future (1957) 582186 Love, R.M. (1957) 582189 Washington, D.C., 89 p. J.Sci.Fd Agric., 8:238-42 Annual Report for the year ending The expressible fluid of fish fillets. V. September 30, 1957 Cell damage in fillets frozen from one side: the general picture Incl. discussion of multipurpose river development, sport fisheries & re-Incl. data on muscle structure of Gadus creation, study by J. Crutchfield of callarias from North Sea. fishery statistics indicating relative rice in fish prices & decrease in per capita consumption since 1890's. HR:sjh MF FAO:sjh M Showan, J.M. & J. Liston (1957) 582187 582190 Gunstone, F.D. & W.C. J.Sci.Fd Agric., 8:222-6 (1957)Russell The use of tetrazolium salts for assess-Animal fats. VIII - The component acids ing the quality of iced white fish of flamingo fat and antelope fat Incl. data on composition of young Gadus Incl. some data on composition of food callarias. of Pheonicopterus chilensis which incl. benthic worms & shrimps.

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Connell, J.J. (1957) J.Sci.Fd Agric., 8:526-37 Some aspects of the texture of ed fish Incl. some data on gross chemic composition & histology of Gaducallarias.	al	Yuen, H.S.H. & F.C. June (1957) 582194 Fish.Bull., U.S., 57(112):251-64 Yellowfin tuna spawning in the central equatorial Pacific Data from 740 laboratory determinations, supplemented by field determinations, of the stage of maturity of ovaries of yellowfin tuna (Neothunnus macropterus) caught in the central equatorial Pacific, showing size at first spawning locality & time of spawning, & giving description of stages of resorption of residual eggs; also notes on occurrence
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Peters, A.J. (1957) J.Soc.Bibl.nat.Hist., 3:238-62 Bibliography of published work on the natural history of the Seychelles and neighbouring arc lagoes List of 398 works dealing with Ocoan generally, geology, natur history, floras, faunas, produc (incl. fisheries), education &	hipe- Indian al tion	Smith, K.A. (1957) 582195 Comm.Fish.Rov., 19(9):1-15 Maine herring explorations and fishing gear experiments Reports gill-net search by M.TACOMET for young "sardines" (Clupca harengus), trials with midwater trawl, pursescine.
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Racek, A.A. (1957) Fish.Bull., Aust., (6):13 p. The systematic position of the prawn from Western Australia Describes Metapenaeus dalli sp. Western Australia & compares it its closest congeners, M. burke M. mastersii.	n. from with	Fingerman, M., L.D. Fairbanks 582196 & W.C. Plauche (1957) Comm.Fish.Rev., 19(9):16-8 Body fluid losses of northern and southern oysters % loss of weight after shelling by Crassostrea virginica: seasonal & geographic differences; relations between concentrations of protein, salt & cells in body fluids.

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Answers to various biological & other questions received by the International Oceanographic Foundation; miscellaneous notes on marine life.		Incl. short account of knowledge of photosynthotic processes in algae, especially Scenedesmus & sea-wood zonation.	
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Answers to various biological & other questions received by the International Oceanographic Foundation; miscellaneous notes on marine life.		Incl. account of experiments with Octopus, Sepia & Homarus.	
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Incl. review of estimates of priproduction in natural waters, & experimental work on Scenedosmus Chlorella.		This report examines the problem suggests methods for the control cropping. It deals primarily with & noddy terms.	of ogg
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Rubin, M. & C. Alexander (1958) 582203 Rigby, J.K. & L.H. 582206 Science, 127:1476-87 Burckle (1958) U.S. Geological Survey radiocarbon Science, 127:1504 dates IV Turbidity currents and displaced freshwater diatoms Gives results of analysis of bottom cores & carbonate in water samples at A review & discussion, with some new various depths in the Atlantic. evidenco, of the problem of occurrence of freshwater diatoms in deep cores from the Bastern Atlantic. FAOssjh M FAOosjh MF Anonymous (1958) 582204 Kolbe, R.W. (1958) 582207 Science, 127:1490-1 Science, 127:1504-5 Illinois Natural History Survey Turbidity currents and displaced freshwater diatoms Note on the centenary of the Survey & the limnological research carried out An answer to 582206. under it. FAO: sjh FAOssjh MF Tecri, A.E. & R.E.Bieber (1958) 582205 Douglas, B. (1958) 582208 Science, 127:1500 J. Hcol., 46:295-322 The ocology of the attached diatoms B-complex vitamins in certain brown and red algae and other algae in a small stony stream Reports analyses of Fucus spiralis, Ascophyllum nodosum, Laminaria agardhi Sampling methods; the topography, & Chondrus crispus. physical, chemical & biological characteristics of Belle Grange Beck, Lancashire, England; features of the habitat & its algal flora; distribution & periodicity of the Achnanthes spp.; other diatom spp. & sp. groups. FAOssjh M FAO:sjh F FAO/58/9/6635

Elton, C.S. (1958) Methuen and Co.Ltd., 181 p. The ecology of invasions by an plants Severe disturbances, spread of epidemic diseases in which anima part, changes in the kind of & animals forming basic food-clare happening increasingly all world. The author offers an exof what is happening and some the improvement of control & bapopulations.	pests, mals play plants hains, over the planation ideas for	Anonymous (1958) <u>Discovery</u> , 19:310 Marine Biology Institute expanded A short note on development of th Marine Institute of Bergen Univer	ıe l
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Donner, J.J. (1958) New Phytol., 57(2) Loch Mahaick, a late-glacial s: Perthshire	582210 ite in	Lowry, C.C. (1958) Discovery, 19:327-32 The Hydrographic Department of the Admiralty A brief ill. history of this Brit Government Department, with accounts functions, vessels, personnel equipment. Work in surveying & challenge of asdic, radar decca. FAO:sjh	ish int of , arting,
Southcott, R.V. (1958) Discovery, 19:282-5 The Cubomedusae - lethal jelly: A ill. essay on the biology of probable causative agents of destings in the tropical Indo-PacChironex fleckeri, Chiropsalmus quadrigatus & Charybdaea rastor	some eath by cific:	Croome, A. (Comp.) (1958) Discovery, 19:343-5 The International Geophysical Yea Month by month Incl., under heading "Great Ocean Discovery", a note on the chartin the Cromwell Sub-surface Pacific Equatorial Current by R/V/S HORIZ HUGH M. SMITH.	ographic g of
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Swedmark, B. & G. Teissier (1958) 582215 C.R. Acad. Sci., Paris, 247:238-40 Otohydra vagans n. g., n. sp., hydrozoaire des sables, apparenté aux Halammohydridées (Otohydra vagans n.g., n.sp., hydrozoan of sands assigned to the Halammohydridae)

Ill. description of the sp. from north coast of Finistère & discussion of its systematic position.

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Halldal, P. (1958)

development is given.

Physiol.Plant., 11:401-20

Pigment formation and growth in blue-

green algae in crossed gradients of

The in vive absorption spectra of 2 chlorophyll a, phycosyanin & yellow

dimensional representation of the

at different light intensities & temperatures at 2 stages of the

pigments have been derived & a three-

different pigments formed in Anacystis

light intensity and temperature

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Gontcharoff, M. (1958) C.R. Acad. Sci., Paris, 247:246-7 L'autogreffe de la trompe chez Eunemertes echinoderma Marion (Self-graft of the proboscis of Hunemertes echinoderma Marion)

Note on experimental implantations.

Union Géodésique et Géophysique 582219 Internationale (1958)Paris, 97-128

Chronique de l'U.G.G.I. no. 12 (I.U.G.G. chronicle)

Contains list of national correspondents for the International Association of Physical Oceanography.

Tech. Rep. Chesapeake Bay Inst., (16):86 p.

Turbulent diffusion in a sectionally

A practicable theory is presented from

which quantitative predictions of mean

characterized by steady-state salinity

& velocity fields which are considered

to vary only in the axial direction.

pollutant-concentration distributions

may be obtained for an estuary

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homogeneous estuary

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Sorokin, C. (1958) 582217 Physiol. Plant., 11:275-83 The effect of the past history of cells of Chlorella on their photosynthetic capacity

The photosynthetic activity of hightemperature strain of Chlorella as affected by the past history of the cells & environmental conditions (temperature & light intensity) during photosynthotic measurements was studied with the Warburg technique.

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Manwell, C. (1958) Physiol.Zoöl., 31:93-100 A "fetal-maternal shift" in the ovoviviparous spiny dogfish Squackleyi Girard On the basis of oxygen equilibre alkaline denaturation rate, the adult hemoglobins of the spin S. suckleyi are distinct protein	alus ium & fotal y dogfish	Matic, M. (1958) Biochem.J., 68:692-5 South African pilchard oil. 7. isolation and structure of an o tetracnoic acid from South Afri pilchard oil Chemical composition of Sardina	ctadeca- can
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Blažka, P. (1958) Physiol.Zoöl., 31:117-28 The anaerobic metabolism of fis Experiments with crucian carp (carassius) & Salmo trutta m. fa	Carassius	Jones, N.R. (1958) Biochem.J., 68:704-8 The ostimation of free sugars i skeletal muscle of codling (Gad callarias) and herring (Clupea Chromatographic analysis.	us
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Marsh, C.A. & G.A. Lovvy (1958) Biochem.J., 68:610-21 The relationship between glucur and galacturonidase activity in limpet and in mammalian tissues Experimental study of enzymes of Patella vulgata, with appendix the synthesis of aryl glycosid acid.	onidase the f on	Connell, J.J. (1958) Biochem.J., 69:5-12 Studies on the protein of fish muscle. 4. Ultracentrifugal ana codling extracts Composition of Gadus callarias coxtracts.	lysis of
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Murray, J. & N.R. Jones (1958) Biochem.J., 68:9p Proceedings of the Biochemical S Post-mortem changes in acid-solu nucleotides of rested codling (C callarias) muscle at 0° Note on a biochemical analysis.	iblo	Rochford, D.J. (1958) Rep.Div.Fish.Oceanogr.C.S.I.R.O., 5 p. The seasonal circulation of the swater masses of the Tasman and Coseas A summary of the investigations of identification & seasonal circulation surface water masses in the ar	urface ral n
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Bergmann, F., S. Rimon & R. Segal (1958) Biochem.J., 68:493-9 Effect of pH on the activity of esterase towards different substantial Experiments with enzyme extracts Electrophorus electricus.	rates	Chittleborough, R.G. (1958) Rep.Div.Fish.Oceanogr.C.S.I.R.O., 23 p. Australia: catchos of humpback wh 1957 Review of production statistics; ratios, maturity, size distributicatches by months & areas.	(17): alos sex
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Food & Agriculture Organization 582239 of the United Nations (1958)

Rop.FAO/TAP, (798):42 p.

Report to the Government of Brazil on fishery biology

Report of authors' assignment FAO under U.M. Expanded Technical Assistance Programme. Observations on marine resources of Brazil with special reference to <u>Sardinella aurita</u>, <u>Mugil</u> (tagging); also to domersal spp.; benthos of the area; organization & programmes of research; recommendations for further development.

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Tsuchiya, Y. & Y. Sato (1957) 582242 Tohoku J.agric.Res., 7:273-6 Rapid method for the determination of moisture content in fish meat. II. Relation between error of estimation and fat content

The methyl alcohol dohydration method was studied. The errors, in the case of fatty fish, were within the limits \pm 1.9%.

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Chemical analysis of external mucous coatings, roc & milt of many fish spp., incl. burbot, roys, Myxine glutinosa, & Pleuronectes platessa.

Analysis of radioactivity in surface waters, etc.

Practical procedures for proparing water, soil & biological samples for counting & then determining their total &- & s-activity in internal, gas-flow, proportional counters are described.

Hagoe, G.R. & C.P. Straub (1958) 582243

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Love, R.M. (1958) 582241

J.Sci.Fd Agric., 9:195-8, 199-203

North Sea cod. I. Muscle cell dimensions.

II. Deoxyribose nucleic acid in the musculature

Histological & biochemical study of Gadus callarias.

Toney, M.L., Jr. (1958) 582244

Growth, 22(1):35-50

Morphology of the blood cells of some crustacea

Ill. account of cytological & histolegical observations on blood, lymphatic & cardiac tissue of Cambarus bartoni, Callinectes sapidus & Homarus americanus from N. Carolina, Virginia & N. America Atlantic coast respectively.

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Heady, E.O. (1958) Canad.J.agric.Econ., 6(1):1-13 Applications of game theory in agricultural economics A method of determining operation strategy generally applicable to exploitation of natural & cultivaliving resources.	P Y TABLE	Ockenden, C.V. (1958) Technique, Beckenham, Weather facsimile bro A short ill. descript facsimile radio trans	12:19 adcasts ion of a chart
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McIntyre, A.D. (1958) Mar.Ros., (1):17 p. The ecology of Scottish inshere grounds. I. The bottom fauna of ceast grounds From a grab survey made in July 3 fishing grounds off the Scotti coast a description is given of standing crop of bottom fauna an This is the first account of a s studies on the fluctuations & productivity of the benthes & th of fish.	east 1954 of sh east the imals. eries of	Boll, J. (1958) Technique, Beckenham, An analogue computer and servos Ill. description of a for study of ship sta principles & use; mea sea forces.	employing magslips computer designed bilization; its
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Mosimann, J.E. (1958) Rev.canad.Biol., 17:137-228 An analysis of allometry in the cholonian shell A comprehensive review, followed report of original study & devel of analytical methods for growth Stornotherus odoratus, Chrysomys & Graptemys geographica.	opment of	U.K. White Fish Autho London, 44 p. Annual report and acconded 31st March 1958 Under headings product distribution, research training, investigating give membership of Addistribution of Britilength & port, & note fleets; accounts.	ounts for the year tion, marketing & h & experiment, ons; appendices visory Council, sh vessels by age,
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Cohen, H. & G.B. Stickler (1958) 582251 Science, 127:1392 Absence of albuminlike serum proteins in turtles

Reports comparative study, by electrophoresis, of blood sera of the reptiles
Alligator mississipiensis, Chelydra
serpentina, Dermochelys coriacea,
Clemmys insculpta & Testudo gigantea.

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Wright, J.C. (1958)

Limnol.Occanogr., 3:150-9

The limnology of Canyon Ferry

cuphotic zone was calculated.

Roid, J.L., Jr. (1958)

Limnol.Oceanogr., 3:160-5

measurements in deep water

A comparison of drogue and GUK

2 series of current measurements made with GJK & drogues are shown to agree

results of 3 days' data, but in short-

closely, not only in the averaged

period variations about the mean.

Reservoir. I. Phytoplankton-zooplankton

relationships in the cuphotic zone

during September and October, 1956

Phytoplankton & zooplankton standing crop, gross & net primary production

wore measured. From these data the daily

rate of loss of phytoplankton from the

F

582254

Raymont, J.E.G. & M.N.E. 582252
Adams (1958)
Limnol.Occanogr., 3:119-36
Studies on the mass culture of
Phacedactylum

rate of growth of culture & the influence of different amounts of light carbon dioxide, phosphates & nitrates on growth.

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Bishop (1958)
Limnol.Occanogr., 3:137-49
Particulate iron in offshore waters of the Panama Bight and in the Gulf of Panama

Schaofer, M.B. & Y.M.M.

Particulate iron is reported from replicate samples taken at 2 depths at several locations in the Panama Bight during November 1955, & at a single inshore location in the Gulf of Panama at bimonthly intervals. A few samples were taken at other locations from a river flowing into the Gulf.

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Pierce, I.L. (1958) 582256 Limnol.Oceanogr., 3:166-70 The Chaetognatha of the inshere waters of North Carolina

Distribution of Sagitta hispida, S. tonuis, S. holonac, S. onflata & Krohnitta pacifica & their relation to different environmental conditions.

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Patterson, A.M. (1958) 582257 Froy, D.G. & J.B. Stahl (1958) 582260 Limnel.Ocoanogr., 3:171-80 Limnol.Occanogr., 3:215-21 Turbulence spectrum studies in the sea Measurements of primary production on with hot wire Southampton Island in the Canadian Arctic, Description of hot-wire equipment & Primary production in 2 lakes of observations on the turbulence spectrum contrasting morphometry was estimated independently from the differences in in Strait of Juan de Fuca during a tidal oxygon, pH, & carbon14 uptake between cycle. A review of several types of turbulence measuring instruments is light & dark bottles. included. \mathcal{H}_I M TL:tl TL:tl 582261 582258 Prowse, G.A. & J.F. Mackereth, F.J.H. (1958) (1958)Limnol.Occanogr., 3:181-91 Talling Limnol.Occanogr., 3:222-38 A portable core sampler for lake The seasonal growth and succession of deposits plankton algae in the White Nile Pnoumatically operated sampler is A description is given of the seasonal described which may be used by 2 men growth & succession, over 5 years, of from a rowing boat. Apparatus takes an planktonic algae in a region of the undisturbed sediment core 6 m long & is White Nile affected by a reserveir. substantially independent of water depth up to a limit of 250 m. F TL:tl F TL:tl Allen, D.M. & A. Inglis (1958) 582262 Livingstone, D.A., K. Bryan & 582259 (1958)R.G. Leahy Limnol.Occanogr., 3:239-41 Limnel.Oceanogr., 3:192-214 A pushnet for quantitative sampling of Effects of an arctic environment on the shrimp in shallow estuaries origin and development of freshwater lakes Description of the gear used to sample Penacus sctiforus & P. aztecus in the Gulf of Mexico in areas overgrown with Description of the physiography of the Alaskan lakes; notes on the plankton & Spartina alterniflora. benthos communities in thom, fossils found in sediments & estimates of annual production.

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Baker, N., A.P. Gibbons & 582263 R.A. Shipley (1958) Biochim.biophys.Acta, 28:579-86 Observations on the deterioration of Glucose-146	Comité Central d'Océanographie 582266 (ct d'Etudo des Côtes (1956) Paris, 375-442 Bulletin d'Information, 10(7) (Informational Bulletin)
Roports experiments with Chlorella pyrenoidesa.	Contains general notes on accamagraphic research programmes, notices of publications, tables of hydrographic data obtained by various vessels & original papers (582267, 582268, 582269).
PAO:sjh F	FAO:sjh I.
Tibbs, J. (1958) 582264 Biochim.bicphys.Acta, 28:636-7 The properties of algal & sperm flagella obtained by sedimentation Biochemical study of Polytoma uvella.	Duboul-Razavot, C. (1958) 582267 Bull.Com.contr.Occanogr., 10:392-406 Lo regime des courants superficiels aux abords des côtes du delta de l'Ebre (The surface current regime along the coast of the Ebro delta) Reports hydrographic surveys made in 1952 & 1956; analyses & discusses results; general discussion of dispersion in sea of river discharge as determined by current charts.
FAO:sjh F	FAO:sjh Ei
Kont, P.W. & M.R. Lunt (1958) 582265 Biochim.biophys.Acta, 28:657-8 An aminosugar nucleotide from Carcinus macnas Biochemical analysis of hypodermal extract of crab sample from English Channel; comparison with results for Maia squinado & Homarus vulgaris.	Morochkine, K.V. (1958) Bull.Com.contr.Occanogr., 10:407-12 Les masses d'eau de la partie nord-ouest de l'Occan Pacifique dans la région de la fesse Kourilo-Kamtchatkienne (The water masses in the NW Pacific Occan in the region of the Kurilo-Kamtchatka trench) French translation of original Russian article, Trav.Inst.Occanol.Acad.Sci. U.R.S.S., 12:155-60, 1955.
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Wilson, D.P. (1958) 582269 Uhatol, G. (1953) J.Mar.biol.Ass.U.K., 37:299-307 Bull. Com. contr. Occanogr., 10:413-21 Notes from the Plymouth aquarium. III. Essai d'interprétation des processus d'erosion littorale dans la region de Coutainville (Essay on the interpret-Considers the breeding of Spondyliosoma cantharus, the sexual display of Labrus ation of littoral crosion processes in ossifagus & learning in Zeus faber. the Coutainville region) Influence of sea currents on sand transport on Normandy coast. M M FAOssjh HR:hr Bagenal, T.B. (1958) 582273 Eve, C. & A.J. Southward (1958) 582270 J.Mar.biol.Ass.U.K., 37:267-86 J.Mar.biol.Ass.U.K., 37:309-13 The breeding of Arenicola ecaudata The fecundity of Clyde plaice Johnston and A. branchialis Aud. & Edw. A comparative fecundity study of at Plymouth Pleuronectes platessa. Description of the breeding cycles of the species with considerations on their behaviour & development. HR:hr M M HR:hr 582274 Morton, J.E. (1958) 582271 Hodley, R.H. (1958) J.Mar.biol.Ass.U.K., 37:287-97 J.Mar.biol.Ass.U.K., 37:315-22 Obscrvations on the gymnosomatous Tubo formation by Pomatocoros triqueter pteropod Clione limacina (Phipps) (Polychacta) Some features of the digestive & The attached tube of P. triquotor is reproductive systems, as well as the described with special reference to the habits & swimming of the pteropod Clione calcaroous grating which is usually limacina are studied from specimens found inside the posterior end of of the dwarf 'southern' race, which damaged tubes. An explanation of the occurs at Plymouth. morphology of tubo, & of calcaroous grating, is attempted with reference to an account of the mode of deposition characteristic of the worm.

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Droop, M.R. (1958) 582275 Armstrong, F.A.J. (1958) 582278 J.Mar.biol.Ass.U.K., 37:323-9 J.Mar.biol.Ass.U.K., 37:371-7 Requirement for thiamine among some Phosphorus and silicon in sea water off marino and supra-littoral protista Plymouth during 1956 The requirement for thiamine was examined The results of analysis of sea water in 11 marino protists of littoral, suprafrom the International Hydrographic littoral or noritic origin. 6 were found Station E I during 1956 are presented to have an absolute requirement for the in graphical form & as integral mean vitamin. All the spp. requiring thiamino values for the water column of 70 m. were auxotrophic with respect to at The seasonal variation is shown. least one other factor (usually vitamin B₁₂). M HRshr HR: hr M Wilson, D.P. & F.A.J. 582276 Alexandrowicz, J.S. (1958) 582279 Armstrong (1958) J.Mar.biol.Ass.U.K., 37:379-96 J.Mar.biol.Ass.U.K., 37:331-48 Further observations on proprioceptors Biological differences between sea in crustacea and a hypothesis about their function waters: experiments in 1954 and 1955 Describes & discusses experiments made Reports the results obtained with during the breeding seasons of Echinus Dupagurus. csculentus designed to obtain more informations concerning the factors responsible for biological differences between sea waters. M HR: hr HR: hr MF Bainbridge, V. (1958) 582277 Kain, J.M. & G.E. Fogg (1958) 582280 J. Mar. biol. Ass. U.K., 37:397-413 J.Mar.biol.Ass.U.K., 37:349-70 Some observations on Evadne nordmanni Studies on the growth of marine phytoplankton. I. Asterionella japonica Gran Lovén A study of the population of the sp. in The planktonic marine diatom sp. has the Clyde Sea Area encompassing been grown in unialgal but not bacteriafree, culture under controlled vertical distribution, seasonal distribution, growth & reproduction, conditions & its growth has been embryo-number & size, fluctuations in measured by means of optical density length & embryo-production during the determinations & cell counts in year, parthenogenetic & sexual combination. reproduction, & food & feeding habits. HR:hr M HR: hr M FAD/58/9/6635

Walne, P.R. (1958) 582281 J.Mar.biol.Ass.U.K., 37:415-25 The importance of bacteria in laboratory experiments on rearing the larvae of Ostrea edulis (L.)

In the experiments reported the growth & settlement of oyster larvae was compared in controls of normal sea water with those in which the bacterial flora was controlled with antibiotics.

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consumption

respiration.

of Plymouth

Forstor, G.R. (1958)

incl. 3 offshore reefs.

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Barnos, H. (1958) 582282 J.Mar.biol.Ass.U.K., 37:427-33 The growth rate of Verruca stroemia (0. Müller)

The mean specific growth rates at half their maximum size are compared for several spp. - Balanus balanoides, B. crenatus, B. balanus, Chthamalus stellatus & Verruca stroemia; it is similar for all spp. except Chthamalus stellatus.

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Froeman, R.F.H. & J. 582283
Llewellyn (1958)

J.Mar.biol.Ass.U.K., 37:435-57

An adult digenetic trematode from an invertebrate host: Proctocces subtenuis (Linton) from the lamellibranch
Scrobicularia plana (Da Costa)

The spp. of <u>Provtocces</u> are reviewed, & some revisions suggested. The adult nature of <u>P. subtenuis</u> from <u>Scrobicularia plana</u> is discussed.

Crisp, D.J. (1958) 582286

J.Mar.biol.Ass.U.K., 37:483-520

The spread of Elminius modestus Darwin in North-West Europe

Marshall, S.M. & A.P. Orr (1958) 582284

On the biology of Calanus finmarchicus.

The seasonal changes in the respiration

of Calanus are considerable & are, on

the whole, related to size & therefore

to weight. Length alone is not enough.

ripe females, although the same length as unripe, have a markedly higher

to account for the differences since

J.Mar.biol.Ass.U.K., 37:473-82

Underwater observations on the fauna of

A brief description is given of the

commonest sessile animals observed by

diving from 12 positions near Plymouth,

shallow rocky areas in the neighbourhood

J.Mar.biol.Ass.U.K., 37:459-72

X. Seasonal changes in exygen

Considers changes in distribution since 1946, invasion of the mainland of Europe, means of dissemination, barriers restricting dissemination, probable history of dispersal & ecological effects of the introduction of Elminius.

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582287 Dalos, R. Phillips (1958) J.Mar.biol.Ass.U.K., 37:521-9 Survival of anaerobic poriods by two intertidal polychaetos, Arenicola marina (L.) and Owenia fusiformis Delle Chiaje

Measurements of glycogen in the body wall of Arenicola indicate that glycogen is consumed during anacrobic conditions. In Owenia most of the glycogen is stored in coelomic cells & these deposits are not drawn upon during anaerobic poriods, yet this sp. can survive long poriods without oxygen, apparently by becoming quiescent. Oil content in both spp. has also been measured. HR:hr M

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Misra, R.K. (1958)

Proc.nat.Inst.Sci.India, 24B:67-78

(Crustacea: decapeda palaemonidae)

Application of a general allometry

India, 23B:42-7 (580584)

Woodland, B. (1958)

possible future.

Trado News, 10(8):3-6

Canada's Atlantic scalfishory

A short account of history of this industry & its present status, &

A new approach to the study of growth-

gradient in the segments of the second

pair of chelipeds of the Indian freshwater prawns, Palaemon hendersoni DeMan

formula proposed in Proc.nat.Inst.Sci.

Union Góodésique & Géophysique 582288 Internationale (1958)Paris, 9-96 Chronique de l'U.G.G.I. no. 11 (I.U.G.G. Chroniclo no. 11)

Contains notes on the activities of IUGG Committee on Geophysics Bibliography, Scripps Cooperative Oceanography & Tuna Expedition, International Standard Sea Water Service & the programme of Polar Front Survey in North Atlantic.

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U.K. Ministry of Agriculture, 582289 Fisheries & Food (1958)Fish.Lab., Lowestoft, 26 p. Fish stock record for 1957

Summarises size & age compositions of Pleuronectes platessa, Solea vulgaris, Cudus callariaz, C. acglofinus, G. merlangus, G. virons, Clupca harongus catches by English vessels in N. Atlantic & arctic waters. Summarizes samples, catches por unit effort, conversion tables, histograms etc., & gives short account of condition of each stock sampled.

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582292

Account of current operations.

Gillospio, G.J. (1958)

Halifax now main centre

Trade News, 10(8):7-8

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582291

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Aronymous (1958) Trade Nows, 10(8):9-12 Studies of fishery resources Summary account of annual meeting Fisheries Research Board of Canad 6-9/1/58, & review of its activit	a,	Wood, E.M. & al. (1957) J.Nutr., 61:479-88 The nutrition of salmonoid fishes Studies on production diets Describes the diets now used in r salmonoid fishes in the Pacific c states, and the variation in the proximate analysis of these diets relates the diet composition to t composition of the hatchery produ	aising oast & ho body
FAO:sjh	MF	FAO:glk	MF
Anonymous (1958) Trade News, 10(8):13-7 Canadian fisheries production, Ma December, 1957 A brief review of production state		Halver, J.E. (1957) J.Nutr., 62:245-54 The nutrition of salmonoid fishes An amine acid test diet for chine salmon Feeding experiments on Oncorhynch tshawytscha.	ok
FAO:sjh	MF	FAO: sjh	MF
Wood, E.M. & al. (1957) J.Nutr., 61:465-78 The nutrition of salmonoid fishes Chemical and histological studies wild and domestic fish A report on histological comparishatchery-reared & wild salmonoids discover the nature & significant chemical & anatomical differences between such fish.	sons of	Anonymous (1958) Trade News, 10(9):3-4 Beechwood development Short ill. account of a hydro-eledam in New Brunswick & its skip-h fish-lift for salmon.	
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McLeese, D.W. (1958) Trade News, 10(9):5-6 Air shipment of lobsters Note on carrying live Homarus and in 'Bathurst' containers.	582299	Atay, I. (1958) Balık Balikçilik, 6(6):17-21 Somun balığının enterasan hayatı (Life story of the salmens) A mote on Oncorhynchus fisheries U.S. west coast.	582302
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Artüz, I. (1958) Balık Balıkçılık, 6(6):7-11 Torik-palamut Sarda sarda ların ve senelere bağlı av peryotları. (Catching periods of Sarda sarda different seasons and years. III Short paper on fishery for this in Turkish waters.	III.	Artüz, M.I. (1958) Balık Balıkçılık, 6(7):18-21 Momleketimiz balıkçılığının dünya akdeniz balıkçılığındaki veri - 1 (The place of Turkish fisheries i Mediterranean countries and in the world - I.) An article dealing with the neces of increasing marine fishery process.	in the
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Uyguner, B. (1958) Balık Balıkçılık, 6(6):12-6 Kıyı gölleleri veya lâgünler hak (About the lagoon type of lakes) A short general article.		Unor, S. (1958) Balık Balıkçılık, 6(7):22-6 Gırgır ağı (The Girgir soines A feature article describing the used in Turkish fishing boats.	
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alapsyster - Arrogani, ig v grafte dage i kvitegerigijskuinskiptytyttig upps ydnu maan kviraanskuinglijde maa hidduskapsyster yn graf y disperialis i bankapsyster yn graf yn disperialis i bankapsyster yn graf y disperialis	elemente es septembles unes pals papelles la configue algun aques alouen fundo	y was an analysis as will a symmetric in a way of the designation of philosophic and the designation of the	
Mazumdar, S.R. (1957) Curr.Sci., 26:125-6 A key to the identification of ined eggs of common fresh-water fine Bengal A modified key giving features for identification.	shes of	Wistendahl, W.A. (1958) Ecol.Monogr., 28:129-53 The flood plain of the Baritan Rinow Jersey Discussion of literature, general features of flood plains; methods results of this survey, especially floristic.	&c
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Andorson, W.W. & J.W. Gehringer (1958) Spec.sci.Rep.U.S.Fish Wildl.Serv 220 p. Physical occanographic, biologic chemical data South Atlantic coathe United States M/V THLODORE Neruise 5 Tabulated & graphed occanographing incl. quantitative & qualitative plankton data & numbers & spp. octaken by trolling & dip not.	al, and st of gill c data,	Winn, H.H. (1958) Ecol.Monogr., 28:155-91 Comparative reproductive behavious ecology of furtion species of darte (Piscos-percidae) Field & laboratory study of indiv & populations of spp. of Percina, Hadropterus & Etheostoma from Ann Michigan & Kontucky & Tennessee.	rs iduals
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Jobson, J.W. & G. Hamoir (1958) Acta chem.scand., 12:351-2 Occurrence in plaice myogen of a molecular weight protein of abnormanino acid composition Preparation by electropheresis of examination by ultracentrifuge & photometer of component of musel Pleuronectes platessa; comparison previous results for Cyprinus car	spectro- c of n with	Anonymous (1958) Comm.Industr., 16:461-6 Government Guano Islands Division bird products Incl. short account of guano indu of C. Africa.	
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Downing, K.M. & J.C. 5 Morkons (1957) Ann.appl.Biol., 45:261-7 The influence of temperature on the survival of several species of fish low tensions of dissolved oxygen Reports experiments with Salmo gair Perca fluviatilis, Rutilus rutilus, Cyprinus carpio, Leuciscus leuciscus Squalius cephalus & Alburnus alburn	dnori	Anonymous (1958) Polar Roc., 9:146-7 United States Navy Hydrographic in Canadian Western Arctic, 1957 Notes on the activities & ico conditions in the area.	
FAO:sjh	e	FAO:tl	M
Armstrong, T. & B. Roberts (1958) 5 Polar Rec., 9:90-6 Illustrated ice glossary. Part 2 Mainly glossary for land ice & associated terms.	82312	Konovalov, I. & R. Sheherbakova (1957) Vodn. Transp., 11 November 1957 Method of hastening melting of dice Description of the results of the application of method of sprinkled dark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark material on ice to hasten method of sprinkled ark method of	ne Ling
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Anonymous (1958) 5 Polar Rcc., 9:139-40 Expeditions of Norsk Polarinstitutt Svalbard and East Groenland, 1956 a 1957 Notes on the activities & programme work for season.	nd	Anonymous (1958) Polar Roc., 9:153-4 Mothed of hastoning molting of fice Roview of 582315.	582316
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Medbee, 0. (1957) Polarboken, :121-3 Scandinavian Airlines System's reporting service Notes on the regular sea ice of tions carried out by Scandinavi Airlines System over the waters between Svalbard & Greenland.	oscrva-	U.S.Navy Hydrographic Office (1957) Washington, D.C., 70 p. Occanographic atlas of the polar I.	582320 scas.
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Anchymous (1958) Polar Rec., 9:156 Scandinavian Airlines System's reporting service Review of 582317.	582318 sea ico	Permanent International (1958) Association of Navigation Cong Bruxelles, Illustrated technical disctionar six languages. I. The sea Containing 2284 words & expressi 6 languages; a number of sketche definitions. Divided into 6 part water, conditions of the sea, wa tides, currents; winds, meteorol marine charts, soundings.	resses y in ons in es & es: sea
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Anonymous (1958) Polar Řec., 9:156-7 Canadian Joint Committee on oceanography: working group on navigable waters Summary of minutes of the meet Canadian Joint Committee on Oceanography held in Ottawa on Soptember 1957.	ing of the	Bykhovskii, B.E. & L.F. Nagibina (1958) Acta zool.sinica, 10(1):1-18 Prodstavitel' novogo semeistva m naticheskikh sosal' shchikov (Anchorophorus sinensis Bykhovsk Nagibina gen. and sp. nov.). Ill. description of a specimen, representing a new family (Anchoridae) of monogenetic trematoda Cynoglossus semilaevis gills.	ii and Ch Ru
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Chia-Jui, S. & W. Kang-Nan (1958)582323

Acta zool.sinica, 10(1):27-30

A new parasitic copepod, Achtheinus
impenderus (Caligoida, pandaridae),
from a shark taken at Poitaiho, Hopei
Province. En Ch

Ill. description of gravid female taken in 1956 from Triakis scyllium.

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Munro, I.S.R. (1958) 582326 <u>Fish.News Lett.Aust.</u>, 17(4):17-20 Handbook of Australian fishes

Ill. notes on spp. Microphis manadonsis, Doryrhamphus melanopleura, Leptoichthys fistularius, Chocroichthys brachysoma, Chocroichthys suillus suillus, Chocroichthys suillus malus, Stigmatophora argus, Stigmatophora nigra, Syngnathoides biaculeatus, Solegnathus fasciatus, Solegnathus spinosissimus, Solegnathus guntheri, S. robustus, S. dunckeri, Haliichthys taeniophorus, Acentronura australe, A. breviperula, Hippocampus abdominalis, H. whitei,

Chia-Jui, S. (1958) 582324 Acta zool.sinica, 10(1):31-3

A marine argulid found in China sca

Ill. description of 2 female specimens of <u>Argulus scutiformis</u> obtained in 1956 from body surface of <u>Discobatus</u> sinensis.

582326 (Card 2)

H. angustus, H. kuda, H. tristis,
H. broviceps, H. planifrons, H.
spinosissimus, Phylloptoryx tacniolatus,
& P. taoniolatus.

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Anonymous (1958)

Fish.News Lett.Aust., 17(4):9

Conference discusses crayfish conservation

Recommendations for Commonwealth action on crayfish conservation in the southern fishery were reached at a conference in Melbourne in February, 1958.

U.K. Ministry of Agriculture, 582328
Fisheries & Food (1958)
Fish.Not., (38):23 p.
Sea fisheries research notes, 1957

Incl. notes on research carried out at U.K. Ministry of Agriculture, Fisheries & Food Research Laboratories during 1957, under main headings: Aim (Prediction, fish-finding, conservation, cultivation); Shollfish.

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Munro, I.S.R. (1958) 582329 Anonymous (1958) 582332 Fish. Nows Lett. Aust., 17(6):5 Fish. News Lett. Aust., 17(5):17-20 Handbook of Australian fishes Fishes nobody could identify Notes on captures of Hyperoglypho Ill. notes on spp. Phycodurus eques cques, P. eques glauerti, Solenichthys porosa (off New South Walos) & racoki, S. loptosomus, Aulostomus Gastorochisma molampus (off Victoria). chinonsis, Fistularia villosa, F. potimba, Acoliscus strigatus, Contriscus aristatus, C. scutatus, Macrorhamphosus clevatus, M. molleri, M. velitaris, Contriscops humorosus, Notopagon lillici, Pegasus draconis, Parapogosus notans, Acarthopogasus lancifor, Melanctaenia nigrans, M. fluviatilis, M. australis & M. maccullochi (Solonichthydae, GLK:sjh M Anonymous (1958) 582333 582329 Fish. News Lett. Aust., 17(6):7-11, 33 (Card 2) Conforence agrees on high seas Aulostomidao, Fistulariidae, fisheries and continental shelf Centriscidae, Macrorhamphosidae, conventions Pegasidao & Melanotacniidae). Text, with short comment, of high seas fisheries & continental shelf conventions & resolutions signed at the U.N. Moeting in Gonova, Fob.-April, 1958. GLK:sjh GLK:sjh M MF Fowler, R.M. (1958) Wolls, V. (1958) 582334 582331 Fish. Nows Lott. Aust., 17(5):23-9 Fish. News Lett. Aust., 17(6):13 Surveying Aust. pearling, beds Shark closure and marketing Article describing cruise of PAXIE in Letter concerning conservation of Timor & Arafura Seas & Gulf of school shark stocks off Southern Carpentaria. Australia by close season legislation.

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FAO/58/9/6635

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Butcher, A. Dunbavin (1958) 582335 Fish. News Lott. Aust., 17(6):13, 32 Shark closuro and marketing

Reply to 582334.

582338 Wolls, V. (1958) Fish. News Lett. Aust., 17(6):29, 34 Surveying Aust. pearling beds

Continuation of 582331.

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Munro, I.S.R. (1958) Fish. News Lett. Aust., 17-20 Handbook of Australian fishes

582336

Ill. notes on spp. Amneris rubrostriatis, Aidaprora carteri, Rhombosoma trifasciata, Rhadinocentrus ornatus, R. rhombosomoides, Quirichthys stramincus, Pseudomugil signifer, P. signatus, P. affinis, P. gertrudae, Tropidostethus rhothophilus, Tacniomembras microstomus, T. lincolnonsis, T. endorac, T. tamaronsis, Taeniomombras clongatus, T. tropicalis, T. edelensis, T. rockingha-

monsis, Atherinosoma vorax, Allanotta

Starik, I.Z. & al. (1958) 582339 Gookhimiia, (1):3-13 K voprosu ob iomicvom metode oprodeleniia vozrasta morskikh osadkov

of the ionium method for determining the age of marine sediment).

Study of core samples of ocean silt. Distribution of Fe, Mn, Ca, Th, V, Io, Ra.3 distinct zonos: littoral, intermediate, high sea. Io contents in the former are variable. In the latter, radioactive equilibrium between Ra & Io favours the ionium method for determining the geological age of silt. M . FAO:go

582336

(Card 2)

punctata, Hypoatherina lacunosa & H. uisila (Tolmathorinidae, Pseudomugilidao, Athorinidao).

Baranov, V.I. & L.A.

(1958) Kuzmina

Gookhimiia, (2):99-106 Skorost otlozhoniia ilov Indiiskogo okeana (Rate of silt deposition in the Indian Ocean).

Data collected by the Soviet Antarctic Expodition in 1956. The rate of sedimentation was measured by the changing ionium concentration down the core sample. V, Th, Io, Fe2 03, MnO contents in samples. This method produces best results at considerable distances from the shore. M FA0:go

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582340

Taylor, A.R.A. (1957) 582341 Canad.J.Ros.(Bot.), 35:477-99 Studies of the development of Zostera marina L. I. The embryo and seed

Morphology of specimens from Canadian Maritime provinces.

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The Conservation 582344
Foundation (1958)
New York, 39 p.
Annual Report for the year 1957

Incl. references to activities related to conservation of aquatic resources, specifically sponsorship of L.A.
Walford's recent study 'Living resources of the seas opportunities for research and expansion', of a survey of basic hydrological data by W.B. Langbein & W.G. Hoyt (to be published in 1958 as 'Data for Decision'), of a study of water low protection of wild life in Alaska, incl. seals; educational activities,

subsidies & grants given; staff &

council membership; accounts.

Taylor, A.R.A. (1957) 582342 Cand.J.Ros.(Bot.), 35:681-95 Studies of the development of Zostera marina L. II. Germination and seedling development

Ecology & morphology of this plant in Princo Edward I area.

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582344

(Card 2)

van Wool, P.B. (1957) 582343 Z.vorgl.Physiol., 39:492-506 Observations on the osmorogulation in Aplysia juliana Pease (Aplysiidae, Mollusca)

Experimental study of weight changes, exygen consumption, blood salinity & survival in various dilutions of sea water. Comparison with results for other spp., especially Mytilus edulis.

Scripps Institution of 582346 Occanography, Univ. California (1957) Borkeloy, 363 p. Occanic observations of the Pacific, 1949

Tabulated oceanographic data collected during 1949.

GLK:sjh

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582347 Canada. Dopartment of (1958)Fisheries Rop. Dop. Fish. Can., (27):42 p. Fish culture development

Report on cultivation activities with respect to oysters & Salmo salar, S. s. sobago, S. fario, S. iridcus; Salvelinus alpinus, S. fontinalis & Cristivomer namayoush. Tables on egg & larvae collection, rearing & distribution, tagging, selective breeding.

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Naumov, N.P. (1958) 582348 Zool. Zh., 37:659-79 Nekotoryo osnovnye voprosy dinamiki

nasoloniia zhivotnykh (Some principal problems of the dynamics of animal population).

Dynamics of animal population is regarded as a result of interaction of the population with its environment. The character of this interaction is dotermined first of all by biological poculiarities of the sp.: fecundity & longovity of its individuals. Tho correlation of both indices in the sp. belonging to 1 class, sometimes to 1

582351

582350

(On the classification

Latham, R.M. (1958) Ponn. Anglor, 27(2):2-7

environmental factors.

Monchadsky, A.S. (1958)

of environmental factors).

O klassifikatsii faktorov okruzha-

Discussion of the needs & bases for

classification of environment based on

classification & suggestion of a

alteration of the variability of

Zool.Zh., 37:680-92

iushchoi sredy

The cel ... truly a remarkable creature

A popular article on Anguilla rostrata & A. vulgaris: life history & fishery.

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582348 (Card 2)

order, differs in its regularities & determines general peculiarities of population dynamics of such a natural group.

Gunston, D. (1958) Ponn. Anglor, 27(2):22-3 How fast do fish swim? 582352

Popular article on maximum speeds attained by different spp., especially over short distances.

FAO: sjh FAO/58/9/6635

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Anonymous (1958)
U.N.Rov., 4(10):3
Sea law conference

582353

582355 (Card 2)

Short account of U.N. Conference on the law of the sea, Geneva, February-April, 1958.

environment to the plants & animals; non-seasonal variations in the California current system since 1916; possible effects of variation in the current system upon the organisms.

FAO:sjh

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California Dopartment of Fish & Gamo (1958)

Torminal Island, 57 p.

Progress Report California Cooperative
Oceanic fisheries investigations, 1 July
1956 - 1 January 1958
Contains an extensive review of
activities during period in question
of the participating organizations,
incl. account of the fisheries & the
main biological & oceanographic results
annotated list of publications in
order of authors names (see also
582355)

GLK:sjh

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Maroc, Service Central de 582357 Statistiques (1958) Rabat, 36 p.

Bulletin monsuel de statistique no. 5 (Monthly bulletin of statistics)

Includes monthly tables of fish landings, by areas, for the period March-December 1957.

FAO:sjh

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Reid, J.L., Jr., G.I. Rodon 582355 & J.G. Wyllie (1958)

In 'Progress Report California
Cooperative Oceanic Fisheries Investigations', by California Department of Fish & Game, Terminal Island,:27-57, Studies of the California current system

A detailed compilation review, with account of recent work, under headings; the winds ever the northeastern Pacific Ocean & their effect upon the water; the currents; the nature of the waters entering the main stream; resultant distribution of properties & their variation with season; relation of the

Maroc, Scrvice Central de 582358 Statistiques (1958) Rabat, 36 p.

Bulletin mensuel de statistique no. 6 (Monthly bulletin of statistics)

Includes monthly tables of fish landings, by areas, for the period January-Docember 1957.

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California University. Scripps Institution of Oceanography U.S. Bureau of Commercial Fish Scripps Tuna Oceanography Rose Program Quarterly Progress Rep Analysis of existing oceanogra new & improved techniques (tel bathytermometer, Roberts curre biological instruments, evalua phytoplankton production measu installation of tide gauges & station, preparation of cruise	(1958) norics, 14 p. carch port no. 3 aphic data; le-recording ont meter, ation of arcments); anchored	Sainio, P. (1958) FiskTidskr.Finl., 65:80-1 'Roskakalan' hävittämisestä (Destruction of scrap fish) The use of dynamite killing of fi the small lakes under the ice.	582362
CLK:sjh	M	FAO:tl	F
Sainio, P. (1958) FiskTidskr, Finl., 65:69-72 Taimenen kasvatuksesta metsäha vesissä (Trout culture in belonging to forest authoritä Description of construction of ponds established in natural v Finland & their management.	waters les)	Bonner, J. (1957) Aust.J.Sci., 19:127-33 Chemical kinetics of growth A theory of plant growth in terms hormonal control.	582363
FAO:tl	F	FAOssjh	MF
Ryhänen, R. (1958) FiskTidskr.Finl., 65:72-8 Scharflingin kalanviljelyslait (Fish culture station in Schaf Description of the Austrian stactivities.	Clingon)	Webster, H.C. (1957) Aust.J.Sci., 19:142-4 Australia's participation in the International Geophysical Year Incl. occanographic program.	582364
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	namenagera rannyeta. Wrothathythorist het		
Boarup, A.J. (1957) Aust.J.Sci., 19:163 Schistosomes in the nasal passages aquatic birds Eggs of Trichobilharzia in nasal mof teal duck, Anas gibberifrons in South Wales.	nucus	Wobster, H.L. (1957) Aust.J.Sci., 20:19 Post-mortem changes in whale man A comparison with the muscle of terrestrial mammals Abstr. of paper read at meeting Linnean Society of New South Washington	gof
	energeneraty agricular consistency is logical a special and	29.5.57.	
FAO:sjh	F	FAO:sjh	M .
Gill, E.D. (1957) Aust.J.Sci., 20:5-9 Report of the ANZAAS Committee for investigation of quaternary strance changes		Balmo, B.E. (1957) Aust.J.Sci., 20:61-2 Upper palacozoic microfloras is sediments from the lake Philli South Australia	
Contains sections on the sediments depositional environment of the Striver estuary, Western Australia, deposits from the sea-floor off coast of South-western Australia, shore sediments in the vicinity of Rottnest & Garden Islands off From Western Australia & organic sediments in Warnbro Sound, Western Australia	marino the noar- f nantle,	Contents as per title.	
FAO:sjh	MF	FAO:sjh	· F
Dawbin, W.H. (1957) Aust.J.Sci., 20:19 Changes in parasitic infections duthe growth of humpback whales	582367 uring	Sapsford, C.M. (1957) Aust.J.Sci., 20:99-105 An estimation of solar energy radiation for Australia	582370
Abstr. of paper read at meeting of Linnean Society of New South Wales 29.5.57.		An approximate method of estimaverage daily solar radiation sky) is outlined, the calculat based upon published figures; limitations of this method are & a recommendation is made for organizations & government be collaborate in providing facilian extensive network of solar recording stations.	(sun & ions boing the stressed, interested odies to itios for
FAO:sjh	M	FAO:sjh	F
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			and property with the state of
Davios, J.L. (1957) Aust.J.Sci., 20:105-11 The importance of cut and fill is development of sand beach ridges An essay on the causes of ridge in S-E Australia. Periodicity in formation, evidence of sea level wave action.	systems	Cook, J.G. (1957) <u>Discovery</u> , 18:477-9 Seawood as a source of chomicals A short review article.	582374
F'AO; sjh	M	FAO: sjh	ΙVI
McKenzie, P. (1958) Aust.J.Sci., 20:213-4 The development of beach sand ri A letter taking up conclusions of Davios, J.L., 1957 (582371)) 1	Volpe, E.P. & G.H. Penn (1957) J.Herod., 48:91-6 Dimorphism of chromatophore patter the dwarf crawfish Ill. analysis of samples of Camba shulfeldtii from eastern Louisian collected 2/4/55-10/1/56.	rollus
GLK:sjh	A A A A A A A A A A A A A A A A A A A	FAO:sjh	F
Bearup, A.J. (1958) Aust.J.Sci., 20:219-20 Tromatode parasites in estuaring Larval stages of Stictodora Hete genus in the molluse Pyrazus aus of L. Narrabeen (near Sidney, Au cercariae attacked Gambusia & At soma, & adult flukes were obtain by fooding infected fish to your (Larus novae-hollandiae). GLK:sjh FAO/58/9/6635	erophyidao etralis estralia); horino-	Ray, S.M. & W.B. Wilson (1957) Fish.Bull., U.S., (123):469-96 Diffects of unialgal and bacteria- cultures of Gymnodinium brovis on and notes on related studies with bacteria Experimental demenstration of dif sensivities of Membras vagrans, M cophalus, Fundulus grandis, Molli latipinna, Fundulus similia & Cyp variegatus to texic substances pr by G. brovis. 2 chromogenic marin bacteria, Flavobacterium piscicid & an unidentified red-pigment-pro form from the west coast of Flori tested for texicity to fish; resul discussed. FAO:sjh	fering ugil enisia rineden educed e Bein ducing da, were

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Whitney, L.V. & R.L. Pierce (1957) 582377 Limnol.Oceanogr., 2:55-61 Factors controlling the nput of olectrical energy into a fish (Cyprinus carnic L.) in an electrical field

A mothod of measuring fish resistivity is described, & the results of an investigation of the effects of tomperature & resistivity on water-tofish resistivity ratio is presented. The idea is discussed that variation of those conditions may cause changes in energy-input to the fish by factors of 10 or 20 even though voltage gradient in the fish-free water remains constant.

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Odum, H.T. (1957)

Limnol.Ocoanogr., 2:85-97

turtle-glass community

Whittaker, J.R. & J.R.

Limnol.Ocoanogr., 2:98-110

Vallentyne

sediment extracts

Primary production measurements in

cleven Florida springs and a marine

During July & August 1955, primary

Florida Keys by means of the diurnal curve method. Diurnal measurements of

oxygen & carbon dioxide were used in

community photosynthetic quotients.

estimating gross primary production &

Those curves show in detail the course

of production hour by hour under various

conditions in whole natural communities.

A semi-quantitative method is described

for the determination of free sugars in

tion of sugars on quantitativo determina-

lako sodiments. Qualitativo determina-

(1957)

production measurements were made in the

582380

582378 Ragotzkie, R.A. & L.R. (1957) Pomeroy Limnol.Occanogr., 2:62-9 Life history of a dinoflagellate bloom

A bloom of Gymnodinium sp. in Duplin River, Goorgia, USA, in March 1955, is described in terms of its distribution, growth rate, production, & rate of diffusion. Production measurements on a second bloom of the same organism are also cited.

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Michor, G.J., Jr. & G.A. 582379 Rounsefell Limnol.Ocoanogr., 2:70-6 Effects of lake fertilization by volcanic activity on abundance of salmon

Tosting the hypothesis that volcanic ash from sporadic cruption may fertilize the lakes & determine the abundance of sockeye salmon in Alaska. The evidence from the following sources is used: free growth, chemical composition of waters of various lakes, plankton volumes & size of young seaward migrating salmon.

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582382 Starr, T.J., D. Martinoz & (1957) W. Fosberg Limnol.Oconnogr., 2:111-3 The vitamin-B₁₂ activity of mullet and shark scrum

Microbiological assay procedures using Euglena gracilis, z strain, were omployed to measure the vitamin-B12 activity of samples of mullet, shark, & human sera.

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On the occurrence of free sugars in lake

582381

tion of sugar within the depth of

sediment in 3 Ontario lakes.

Starr, T.J., M.H. Jones & 582383 Yontsch, C.S. & J.H. (1957) (1957)D. Martinoz Rythor Limnol.Occanogr., 2:140-2 Limnol.Occanogr., 2:114-9 The production of vitamin B12-active Short-term variations in phytoplankton chlorophyll and their significance substances by marine bacteria The production of members of the Description of the diurnal fluctuations of chlorophyll a content of phytovitamin-B₁₂ family of compounds by 34 marine bacteria that were grown in a plankton population & the corresponding B12-deficient medium was assayed. daily rhythm of photosynthesis. GLK: tl M W GLK:t1 Gorham, E. (1957) 582387 Turner, H.J., Jr. & D.L. 582384 Bolding (1957)Limnol.Occanogr., 2:143-54 Limnol, Occanogr., 2:120:4 The chemical composition of some The tidal migrations of Donax variabilis natural waters in the Cairn Gorm-Strath Spey district of Scotland Some chomical properties of natural Investigations on the behaviour of beach waters in the Cairn Gorm-Strath Spoy clam in respect of its up & down migrations with the tide & suggestions area have been investigated. Differences of ionic concentrations in on the nature of the stimulus causing 24 waters analyzed for pH, Na, K, Ca, the migration. Mg, HCO3, Cl, SO4, NO3, PO4 & SiO2 are interpreted in terms of variation in goology, topography, local climate & vegetation. GLK:t1 M . GLK:tl Th Ayors, J.C. & R. Bachmann (1957) 582388 Proctor, V.W. (1957) 582385 Limnol.Occanogr., 2:125-39 Limnol.Occanogr., 2:155-7 Studies of algal antibiosis using Simplified computations for the Hacmatococcus and Chlamydomonas dynamic height method of current determination in lakes 5 common freshwater algae were grown in Description of the method with tables the 10 possible 2-membered combinations. Investigations on the factors & rate for specific volume anomaly & at which Chlamydomonas eliminatos Haomacoefficient of compression. tococcus in the culture test of the toxicity of unsaturated fatty acids to the algac.

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Anonymous (1958) 582390 Discovery, 19(1):8-9 The biological productivity of Britain Review of the Symposium held by the Unstitute of Biology, Oct. 4 & 5, 1957, on The Biological Productivity of Britain.'(soc 580725 & 580726). FAO:sjh MF Rejo, A. (1957) 582391 Trade News, 10(1):3-4. Pair-trawling on the Grand Banks Short ill. article on this method of fishing & its use in NW Atlantic. FAO:sjh MF Anonymous (1957) 582393 Trade News, 10(1):7-10 Candian fisheries production, May 1956-April 1957 Short review of production statistics. FAO:sjh MF FAO:sjh	Davis, C.C. (1957) Limnol.Occanogr., 2:158-9 Cordylophora lacustris Allman fro Chagrin Harbor, Ohio An account of the first record of occurrence for the Great Lakes dr area (4 November 1956) & the firs water record from North America f years. Discusses presumed means o transport.	ainago t fresh or 35	Anonymous (1957) Trade News, 10(1):6 The "Norwegian Jigger" Ill. note on this new lure for haing cod & pollock, tested off Nov Scotia.	
Trado Nows, 10(1):7-10 Canadian fisheries production, May 1956—April 1957 Review of the Symposium held by the Institute of Biology, Oct. 4 & 5, 1957, on The Biological Productivity of Britain. '(soc 580725 & 580726). F Rejo, A. (1957) Trado Nows, 10(1):3-4 Pair-trawling on the Grand Banks Short ill. article on this method of fishing & its use in NW Atlantic. FAO:sjh WAD:cjh Mr Trado Nows, 10(1):7-10 Canadian fisheries production, May 1956—April 1957 Short review of production statistics. Trado Nows, 10(1):7-10 Canadian fisheries production, May 1956—April 1957 Short review of production statistics. The review of production statistics. Trado Nows, 10(4):6-7 Fisheries Research Forum Crendo Riviero, P.Q. Short roport of a moeting of fisheries scientists, which included a lecture on fisheries occanography by L.M. Lauxier.	GLK: vad	MF	FAO:sjh	М
Rejo, A. (1957) 582391 Trade News, 10(1):3-4 Pair-trawling on the Grand Banks Short ill. article on this method of fishing & its use in NW Atlantic. Short report of a meeting of fisheries scientists, which included a lecture on fisheries occanography by L.M. Lauzier. FAO:sjh M WAD:sjh M	Discovery, 19(1):8-9 The biological productivity of Br Review of the Symposium held by t Institute of Biology, Oct. 4 & 5, on 'The Biological Productivity o	itain he 1957,	Trade News, 10(1):7-10 Canadian fisherics production, Ma April 1957	y 1956 –
Trade News, 10(1):3-4 Pair-trawling on the Grand Banks Short ill. article on this method of fishing & its use in NW Atlantic. Short roport of a meeting of fisheries scientists, which included a lecture on fisheries occanography by L.M. Lauzier. M WAD:sjh M		F	FAOssjh	MF
The same of the sa	Trade News, 10(1):3-4 Pair-trawling on the Grand Banks Short ill. article on this method		Trade News, 10(4):6-7 Fisheries Research Forum Grande Riviere, P.Q. Short report of a meeting of fish scientists, which included a lect on fisheries occanography by L.M.	erios
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Le Cren. E.D. (1958) 582395 Fish.Stud.FAO, (8):52 p. The application of science to inland fisheries

Examines physical, chemical & biological factors of aquatic production & its realization as fishery yield & discusses possibilities of increased control of hydrobiological processes.

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rostratus.

Neal, G.M. (1958)

Canad. J. Res. (Zool.), 36:95-111

Notes on some dicranophorinae (Rotifera)

Reliability of structures. Dicranophorus uncinatus (Milne) has been redesignated

as D. aquilus (Gosse) & both spp. are

grypus group, D. cernuus Harring & Myers is synonym of D. rostratus (D.-N. & F.); D. corystis H. & M. & D. haueri H. & M. are valid spp. distinct from D.

redescribed. D. uncinatus of Weber (nec

Milno) is a member of the D. rostratus-

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582398

Vikse, H. (1958) 582396 Aarsberetn.Norg.Fisk., (6):39 p. Vintersildfisket 1957 herring fishery 1957)

Fisheries statistics of the catches, participation & the use of gear in various areas along Norwegian coast.

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Hoar, W.S. (1958) 582399 Canad. J. Res. (Zool.), 36:113-21 Affects of synthetic thyroxine and gonadal steroids on the motabolism of goldfish

Studies of both standard & active metabolism of Carassius auratus agree with most previous findings that thyroid hormone lacks a calorigenic effect while the gonadal steroids stimulate oxygen consumption. Thyroxine, testosterone, or stilboestrol will produce a marked increase in the excretion of nitrogen as measured by changes in the ammonia of the ambient water. F FAOssjh

Cliona celata occurs in Prince Edward I.;

C. lobata in Prince Edward & the Gulf shore of New Brunswick; C. vastifica in the B. of Fundy, off Sable I., off

Prince Edward I., & off Newfoundland. Intraspecies grafts of C. celata & C.

Warburton, F.J. (1958)

validity of C. lobata

Canad. J. Res. (Zool.), 36:123-5

Norway. Fiskeridirektøren (1958) 582397 Aarsberetn.Norg.Fisk., (10):19 p. Beretning om selfangsten, håkjerringfisket og overvintringsekspedisjonene i (Report on seal and Greenland shark fishery and overwintering expeditions during 1957)

Statistics of sealing in the Newfoundland & Greenland areas during 1957.

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failed.

lobata succeeded, but interspecies grafts

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582400 Boring sponges, Cliona species, of eastern Canada, with a note on the

582404 582401 Montreuil, P.L. (1958) Lawler, G.H. (1958) Canad. J. Res. (2001.), 36:127-9 Canad. J. Res. (Zool.), 36:205-15 Corynosoma magdaleni sp. nov. (Acantho-Variation in number of dorsal spines in cephala), a parasite of the gray seal the brook stickleback, Zucalia in eastern Canada inconstans Described from Halichoerus grypus Comparative study of occurrence of (Fabricius), & the Atlantic harbor seal, specimens with 6 dorsal spines in Phoca vitulina concolor (DeKay), the Manitoba & Ontario lakes. latter as an infrequent accidental host in eastern Canada. Juveniles were found in Hippoglossus hippoglossus (Linn.) & Myoxocephalus scorpius (Linn.) in the Magdalen Islands region of the Gulf of St. Lawrence. F M FAOssjh FAO: sjh Laird, M. (1958) 582405 582402 Montreuil, P.L. (1958) Canad. J. Res. (Zool.), 36:153-65 Canad. J. Res., (Zool.), 36:263-4 Parasites of South Pacific fishes. I. Relaxation and fixation of Acantho-Introduction, and Hacmatozoa cephala Lists fish spp. examined 1952-54, Technique for treatment of those material obtained, techniques used, helminth parasites from fish, seals etc. & new host & locality records for Haemogregarina bigemina & H. mugili in Clinus perspicillatus & Tripterygion rufopileum, Norfolk I. FAOssjh M FAO:sjh M Laird, M. (1958) 582403 Canad. J. Res. (Zool.), 36:167-73 Biológia, 13:451-62 Parasites of South Pacific fishes. II. Zoznam perloočiek (Cladocera) zistených Diplectanum melanesiensis n. sp., a Zitnom ostrove R. 1953-57 (List of monogenetic trematode from Fiji and the Cladocera found in the Schütt Islands, Now Hebrides Southwest CSR, from 1953-57). Description of sp. from gills of Description of 79 spp. of Cladocera + immature Epinephelus merra from coral 1 variety of which 15 spp. + 1 variety pools in New Hebrides & Fiji. arc considered as new for the fauna of the CSR.

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Babaian, K. . (1957) 5824071 Proc. of the Conference on Fisheries,

Moskva, 1954,:5-6 Vstupitelnoe slovo nachalnika glavnogo upravlenija rybookhrany rybovodstva Ministerstva rybnoi promyshlennosti SSSR (Conservation and pisciculture administration of Fish Industry of USSR)

The development of fishing resources in inland waters, both frosh & salt, is unsatisfactory. With the means at their disposal, scientists & specialists in the field should make an effort towards developping natural & artificial reprodustion of both anadromous & pond cultivated fish. FAO: go MF

552409 (Card 2)

livo fish-feed, herrings. Reclamation of fish resources in connection with industrial construction on waterways.

FAO:go

MF

Pavlovskii, I.N. (1957) 582408 Proc. of the Conference on Fisheries, Moskva, 1954, :6-7

Vstupitelnoe slovo Predsedatelia Ikhtiologicheskoi Komissii Akademii Nauk (Introduction by the Chairman of the Ichthyological Commission of the Academy of Sciences of USSR)

Appeal for a strict analysis at the conference, of achievements & failures. For the setting of further targets towards the development of scientific research & of commercial fish reserves.

FAOsgo

MF

Kozhin, N.I. & B.I. Cherfas (1957) 582411 Proc. of the Conference on Fisheries, Moskva, 1954,:16-23

Sovremennoe sostoianie i zadachi nauchno issledovatelskikh rabot po razvedeniiu prokhodnykh i poluprokhodnykh (Present conditions and targets set for scientific research with regard to breeding migratory & semi-migratory fish)

Aim at throwing light on basic problems of reproduction of anadromous & semianadromous fish: scientific research & experiments; improvement of conditions for spawning & incubation; larvae, fingerlings, yearlings & smalt breeding; study of environments, live fish-feed, diseases. FA0:go

Tarasiuk, B.F. (1957) 582409 Proc. of the Conference on Fisheries, Moskva, 1954, 8-15

Sovremennoe sostoianie i perspktivy iskusstvennogo zozvedeniia prokhodnykh i poluprokhodnykh ryb (Present situation & possibilities for artificial breeding of migratory & semi-migratory fish)

Enumeration of existing piscicultural concerns. Shortcomings mainly in the field of scientific research. Lecture divided into statements on the present situation on breeding of Acepenseridae, Salmonidae, Cyprinidae & porchpike,

582412 Isaev, A.I. (1957) Proc. of the Conference on Fisheries, Moskva, 1954,:24-8

Sovremennoe sostoianie i perspektivy, rasvitiia prudovogo rybnogo khosiaistva (Present situation and v SSSR possibilities for developing pond fish farming in USSR)

Figures showing progress. Importance of selection, appropriate food, pond fertilizer, maintenance. The Hinistries of Agriculture & Fish Industry do not pay enough attention to the development of fish farms. Better use for fish breeding should be made of industrial water reservoirs.

FAO:go

582413 Martyshev, F.G. (1957) Proc. of the Conference on Fisheries,

Moskva, 1954,:29-37 Sovremennoe sostoianio i zadachi nauchno isslodovatelskikh rabot po prudovomu rybovodstvu (Present situation and tasks of scientific research on pond fish breeding)

Full support to fish farming by the Agriculture Administration is wanting. Description of achievements by scientists on biology, behaviour, reproduction, food resources, selection, diseases, environment of fish. Combined farming: water fowl on fish ponds, carp & rice cultivation. Pond maintenanco; advantage of mixed population. FA0:go

Detlaf, T.A. (1957) 582414

Proc. of the Conference on Fisheries, Moskva, 1954,:47-53

O printsipakh razrabotki rezhimov inkubatsii ikry ryb (Principles governing the working out of the incubation process of fish roc)

Data on which the incubation pattern should be based. Importance of data obtained on critical stages. Necessary conditions for working out the pattern. Poculiar features of the hatching stage.

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Emelianov, S.V. (1957) 582415 Proc. of the Conference on Fisheries,

Moskva, 1954,:54-63 Znachenie otschki kachestvennoi storony rozultatov iskusstvonnogo razvedenija

ryb · (Importance of appraising the quality of the results obtained with artificial fish breeding)

Control over any defects in eggs, larvae & fry is as important in pisciculture as similar control in cattle or poultry breeding. Embryos are sensitive to altered conditions. The author is contrary to deglutination of roc.

FAO:go

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Korzhnov, P.A. (1957) Proc. of the Conference on Fisheries,

Moskva, 1954,:65-70

O fiziologicheskikh metodakh otsenki kachestva vyrashchivaemoi molodi promyslovykh ryb (Physiological methods of appraising the qualities of the young brood of commercial fish)

Close connection should be ostablished between studies of morphologists, physiologists & biochemists. Deals mainly with blood composition. Hemoglobin contents of blood is higher in wild than in artificially raised young sturgeon. Only detailed studies can enable us to form judgements on the biologic qualities of fish we breed. FAO: go

582417 Nikoliukin, N.I. (1957) Proc. of the Conference on Fisherics, Moskva, 1954,:71-80

Otdalonnaia gibridizatsiia ryb i eo prakticheskoe znachenie (Hybridization of distantly related fish and its practical importance)

Statements on the basis of experience with hybridization of Acipenscridae. The problem consists in producing types of freshwater, pond-bred reproducible hybrids of Acipenseridae.

FAOsgo

Mazilkin, I.A. (1957) 582418 Proc. of the Conference on Fisheries,

Moskva, 1954,:81-7

Biologichoskii metod borby s saprologici (Biological methods of control over saprolognia)

Use of antagonistic microbes, microlysic bacteriae, for control over saprolegnia. Positive results in incubators. Possibility of extending this method to natural environments of fish spawn.

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Gorbilskii, N.L. (1957) 582419 Proc. of the Conference on Fisheries, Moskva, 1954,:89-93

Gistofiziologicheskii analiz pishchevaritelnoi sistemy osetrovykh i kostistykh na rannem periode raznitiia i metodika raboty s lichinkami v rybovodstve (Histophysiological analysis of the digestive system of sturgeons & bony fish during the early stages of development & working methods with larvae in fish breeding)

Neod for thorough knowledge of structure & functions of the alimentary organs of larvae. The chief biologic basis of productive fish breeding is not proper

Proc. of the Conference on Fisheries, Moskva, 1954,:104-16 Sravnenie effektivnosti ispolzovaniia kormov prudovumi rybami i sel'skokhoziaist vonnymi zhivotnymi (Comparison between effective use of fodder by pond fish and livestock)

Poliakov, G.D. (1957)

Assimilation of exchangeablo energy, proportion of food consumption to increase in weight, protein storage etc. Comparison with livestock is in favour of fish.

FAO: go

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582419 (Card 2)

fortilization of spawn, but provention of wholesale less of larvae at the transition stage from yolk to natural food consumption.

582423 Dogel, V.A. (1957) Proc. of the Conference on Fisheries, Moskva, 1954,:117-22

Znachenie boleznei ryb v vosproizvodstve (Effect of diseases rybnykh zapasov on fish reserves)

Description of fish diseases, their propagation, remedies & preventive measures.

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582421 Konstantinov, A.S. & N.S. Konstantinova (1957) Proc. of the Conference on Fisheries,

Moskva, 1954,:95-102 Organzatsiia razvediniia zhivykh kormov (enkhitreid i khironomid) na rybovodnykh zavodakh (Organization of raising living fodder (enchytreid & chironomidae) on fish farms)

Description of artificial breeding, yields & value as fish-feed. Methods for lasting preservation of living fodder.

FAO: go FAO/58/9/6635

Sostoianie i osnovnye zadachi osetrovodstva v nizoviakh iuzhnykh rek (Conditions & basic problems of sturgeon breed ing in the lower course rivers of S.USSR)

Proc. of the Conference on Fisheries,

Gerbilskii, N.L. (1957)

Moskva, 1954,:124-8

According to results of sciontific research & production tests, the principal biotechnical problems of sturgeon breeding are solved. The rate, at which accumulated experience is applied on a commercial scale, is inappropriately slow. The main task of science consists in helping to restock the Caspian & Black Seas with Acipenseridae. MF FAO: go

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Kazanskii, B.N. (1957) 582425 Proc. of the Conference on Fisheries, Moskva, 1954,:130-7

Analiz iavlenii, proiskhodiashchikh v iaitsekletkakh osetrovykh pri primenenii gipofizarnykh inicktsii (Analysis of phenomena occurring in the ovicells of sturgeon after hypophysical injections)

Results of citological study of nuclear alterations within ovicells of sturgeon from the moment of hypophysical injection to complete evulation & then after fertilization to the first dividing of cleavage nuclei.

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Quality of roc. Causes of variable properties of roc. Effect of deglutination & of incubation methods on the development & losses of eggs & larvac. FAO:go MF

Proc. of the Conference on Fisheries,

Biotckhnika inkubatsii ikry osetrovykh

ryb na r. Don (Incubation technique

on Acipenseridae spawn on the Don river)

deglutination of spawn is performed not

in a suspended state. Dead eggs (Sapro-

healthy ones & are syphoned out of the

Description of an incubator in which

by hand, but automatically by flow of water from beneath. Eggs are maintained

legnia infected) do not stick to

Proc. of the Conference on Fisheries,

methods used for obtaining Acipenseridae

(Biological foundation of

Biologicheskoo obosnovanio motodov

polucheniia lichinok osotrovykh iz obeskleinnoi ikry v usloviiakh proiz-

larvae from expressed deglutinized

spawn under conditions of commercial

Vornidub, M.F. (1957)

brooding)

Moskva, 1954,:160-74

Iushchenko, P.S. (1957)

Moskva, 1954,:176-9

Proc. of the Conference on Fisheries,

Moskva, 1954,:139-49

Eksperimentalnye i tsitologicheskie damye o protsesse oplodotvoreniia u sterliadi v sviazi s metodikoi osemeneniia (Experimental and citological data regarding the fertilization process in Acipenser ruthenus in connection with artificial insemination methods)

Study & tests carried out on spawn of Acipenser ruthonus & hybrids (A.ruthonus

A. güldenstädti) with the scope of stocking new water reservoirs with freshwater Acipensoridae.

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incubator.

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Sadov, I.A. (1957) 582427 Proc. of the Conference on Fisheries,

Moskva, 1954,:151-9
O roli samtsa v noreste osetrovykh ryb i o metodakh oplodotvoroniia ikry (The role of malos in the spawning process of Acipenseridae and different methods applied for artificial fertilizing of spawn)

Primary importance of the male's function in both the evulation & the extrusion of spawn. Studies should be completed in order to obtain perfect roe for artificial breeding. Data on artificial fertilization, sperm, dispermia, polyspermia. FAO:go

Gordionko, 0.L. (1957) 582430

Proc. of the Conference on Fisheries, Moskva, 1954,:180-5

Opyt promyshlonnogo razvodoniia osetrovykh na Kurinskom rybovodnom zavode (Experience of commercial sturgeon breeding at the Kurra fish nursery)

Description of breeding methods & operational conditions at the concern.

FAO:go

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Milshtoin, V.V. (1957) 582431 Proc. of the Conference on Fisheries, Moskva, 1954,:186-94

Vyrashchivanio molodi osetrovykh i belorybitsy v prudakh delty Volgi (Raising of young sturgeon and Stenodus leucichthys in ponds at the Volga delta)

Description of methods & procedure for using the same pends for raising Acipenseridac fry from larvac & Stenodus loucichthys fry from ripe spawn as a second crop. A third crop consists of fattoning carp fingerlings. Pond fortilizer, living food, rate of growth.

FAO: go

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Lovanidov, V.Ia. (1957) 582434 Proc. of the Conference on Fisheries,

Moskva, 1954, 219-26 Vyrashchivanii molodi amurskoi osennoi koty na rybovodnykh zavodakh (Raising young autumnal Amur chum salmon Oncorhynchus kota) in fish nursories)

Data collected from Teplovka & Bidjan hatcheries. Description of environments, food & growth rate up to the smolt stage of chum & humpback salmon.

FA0:go

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Konovalov, P.M. (1957) 582432 Proc. of the Conference on Fisheries, Moskva, 1954,:195-205

Itogi opytnykh rabot po vyrashchivaniiu molodi sevringi v gruntovykh basscinakh (Results of experiments in raising young Aciponser stellatus in unlined pools)

Indices of growth in relation to density of population & to food consumption. Mothods of stocking & feeding. Temperature & gas regime of water.

FAO:go

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Chorniavskaia, V.K. (1957) 582435 Proc. of the Conference on Fisheries, Moskva, 1954,:227-34

Opyt raboty Bidzhanskogo i Toplovskogo rybovodnykh zavodov po razvedeniiu osonnoi kety (Experience at the Bidjan & Toplovka fish hatcheries for autumnal chum salmon broeding)

Possibility of replacing natural reproduction by artificial breeding. Indications that the latter is even more advantageous. Data of the hatcheries on chum salmon reproduction.

FAO:go

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Evropoitseva, N.V. (1957) 582433 Proc. of the Conference on Fisheries,

Moskva, 1954,:206-18 Osobonnosti perekhoda v pekatnec sostoianic molodi lososci pri prudovom vyrashchivanii (Characteristic features of transition of young salmon to the smolt stage under conditions of pond culture)

Experimental raising of smolts in ponds. Characteristics & requirements at various stages from larva to smolt. Behaviour of pend bred smolts & conditions under which they should be roleased. FAOsgo MF

Barach, G.P. (1957) 582436 Proc. of the Conference on Fisheries, Moskva, 1954,:235-42 Biologia i vosproizvodstvo zapasov chernomorskoi kumzhi (lososia - foreli) (Biology & reproduction of the stock of

Black sea salmon-trout (Salmo trutta labrax)) Attempt to solve the problem of artificial reproduction by studying tho biology of sca-trout. Classification of the Black sea salmon. Identity of the

freshwater & anadromous forms at early

stages of development. Spawning migration, growth & seaward run. Natural & artificial reproduction.

FAO: go

MF

Bezdenezhnykh, P.G. (1957) 582437 Proc. of the Conference on Fisheries,

Moskva, 1954,:243-50 Pervye resultaty rybovodnogo osvoeniia aralskogo usacha i organizatsia ego iskusstvennogo rozvedeniia v usloviiakh stroitelstva Kzyl-Ordinskoi plotiny na Syr-Darie (First results of commercial acclimatization of Barbus brachycophalus & its artificial breeding in conditions created by the construction of the Kzyl-Orda dam on the Syr-Daria river)

Description of contrivances & procedure. Transfer of reproducors; obtainment of ripe spawn, incubation. Transfer of

582440 Borliand, T.B. (1957) Proc. of the Conference on Fisheries, Moskva, 1954,:259-67

O napravlonnom formirovanii zapasov karpovykh ryb v iuzhnykh moriakh SSSR i promyshlennom razvedenii kutuma (Plannod development of Cyprinidae reserves in southern seas of URSS and commercial breeding of Rutilus frisii kutum)

Data on reproduction biology & breading biotechniques of rheophilous cyprinidac. Pattern & indices required for R. frisii commercial breading.

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larvae from spawning grounds to ostuary. Raising fry in ponds. Possibility of balancing the effect on maturation of reproducers, produced by the construction of the dam.

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FAO: go

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Tanaisichiuk, V.S., I.K. Vonokov 582441 & T.K. Nebolsina (1957)Proc. of the Conference on Fisheries,

Moskva, 1954,:268-74 Biologiia razmnozheniia volzhskogo sudaka kak osnova moropriiatii po vosproizvodstvu ogo zapasov of roproduction of the Volga porch-piko as a basis for working out measure for restoring its stocks)

Study of spawning grounds & habits. Conditions in which larvae thrive. Most rational method for reproducing perchpike stocks is to transport not reproducers but ripo spawn to bodios of water with environment favourable to larvae MF FAO:go

Sukhanova, H.R. (1957) 5824391 Proc. of the Conference on Fisherics,

Moskva, 1954, \$251-8 Razvedenie rybtsa i shemai na Kubani (Breeding of Vimba v. vimba natio carinata and Chalcalburnus chalcoides danubicus in the Kuban region)

Causes of stock decreasing & remedies. Studies of behaviour & environment for artificial breeding. Conservation measures.

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Milshtoin, V.V. (1957) 582442 Proc. of the Conference on Fisheries, Moskva, 1954, 275-82

Razrabotka i vnedronie motodov povysheniia effektivnosti delty Volgi (Working out & introduction of methods fit to increase the effective operating of hatchery-nurseries in the Volga delta)

Elimination of roods & rushos favours the oxygen regime, plankton & bonthos development. Organic & mineral fertilizer isolation of spawners. Selection of reproducers.

FAO:go

MF

582443 Belogolovaia, L.A. (1957) Proc. of the Conference on Fisheries, Moskva, 1954,:283-8

Formirovanio kormovogo planktona v vodocmakh norestovo-vyrostnykh khoziaistv dolty Volgi (Formation of fodder plankton in hatchery-nurseries of tho Volga delta)

Study of consequent development of various plankton spp. in natural & improved conditions, as a basis for constituting appropriate live-food reservos at hatcheries & nurseries.

FAO: go

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Mordukhai-Boltovskoi, F.D. (1957) 582446 Proc. of the Conference on Fisheries,

Moskva, 1954,:300-7

Razvitic fauny bezpozvonochnykh v nerostovo-vyrostnykh vodocmakh na Donu v sviazi s vyrashchivaniem v nikh molodi ryb (The development of invertebrate fauna in the hatchery-nurseries in connection with young fish breeding)

Description of living matter appearing gradually in fish-farm bodies of water. Variation of species & general amounts by periods of development & depression. During the latter, fertilizer should be applied.

FAOsgo

Karzinkin, G.S. & I.A. 582444 Shokhanova (1957)

Proc. of the Conference on Fisheries, Moskva, 1954,:289-95

Nekotorye printsipialno novye polozhenija v problome udobreniia vodocmov (Some basically new principles in the problem of fortilizing bodies of water)

The function of mineral phospherus is not limited by requirements of vegetal fish food. Absorbed directly & assimilated by fishes, it improves their dovolopment.

FAO: go

MF

Tamanskaia, G.G. (1957) 582447 Proc. of the Conference on Fisheries, Moskva, 1954,:308-13

Vosproizvodstvo sudaka i tarani v Kubanskikh limanakh (Porch-pike and Roach reproduction in the Kuban ostuary)

Tentative data on best conditions for breeding fry of perch-pike & Azov Sea roach in the channels & lakes of the Kuban ostuary.

FAOsgo

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Nikolskii, P.D. (1957) 582445 Proc. of the Conference on Fisheries, Moskva, 1954,:296-9

Effektivnost uplotnonnykh posadok sudaka na nerest v uslovijakh nerestovo vyrostnykh khoziaistv na Donu (Efficiency of increased density of perch-pike spawnors as applied to the Don hatcherynurseries)

Description of experiments & yields according to the number of reproducers to the hectare. Proportion between perch pike & bream as practised at the hatcheries under study. Duration of rational co-existence of both spocios' fry. FAO: go

582448 Rodina, A.G. (1957) Proc. of the Conference on Fisheries, Moskva, 1954,:314-22

Dinamika biomassy bakterii i kharakter mikrobialnykh protsessov v rybovodnykh prudakh pri organicheskom i mineralnom (Dynamics of the biomass udobronii of bactoria and the character of microbial processes in fish breeding ponds in which organic and mineral fortilizer is applied)

Description of bacteria & their development following introduction into pends of organic (withcred grass) or minoral (superphosphate or/& ammonium nitrato) fortilizer, or both. Abundance of

582448 (Card 2)

bacteri-plankton & phytoplankton favours the development of zooplankton.

should not be climinated in fish ponds, but kept under control.

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582451

Vinberg, G.G. (1957) 582450 Proc. of the Conference on Fisheries,

Moskva, 1954,:323-9
Biologichoskic osnovy offektivnogo
primoneniia mineralnogo idobreniia
prudov (Biological principles for an
offective application of mineral
fertilizer to ponds)

Mineral fertilizer is required in fish ponds only for stimulating development of phytoplankton. Both phosphates & nitrates are necessary. The effect is different when fertilizer is applied to water or to the bottom of drained pends.

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Nosal, A.D. (1957) 582453 Proc. of the Conference on Fisherics,

Moskva, 1954,:340-6
Vyrashchivanie sigov v prudakh
Ukrainskoi SSR (Growing white fish
in pends of the Ukrainian SSR)

Introduction of spawn into Ukrainian water reservoirs produced bad results. Successful experiments were carried out with selected reproducers bred in pends from imported fingerlings. Creation of a local acclimatized stock will open the possibility of raising whitefish in the south on a commercial basis.

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Shpot, G.I. (1957) 582451 Proc. of the Conference on Fisheries,

Moskva, 1954,:330-9
Rogulirovanic vodnoi rastitelnosti v
rybovodnykh prudakh s tseliiu
uvolicheniia kolichestva benticheskikh
organizmov kak kormovoi bazy dlia karpa
(Control over aquatic vegetation in fish
breeding pends with a view to increasing
the quantity of benthic organisms
intended as a basic fodder for carp)

Although benthos is the chief food of carp, the importance of demorsal phytophilous animal life should not be underostimated. Aquatic vegetation, especially soft weeds which favour the oxygen regime

Khomchuk, A.A. (1957) 582454

Proc. of the Conference on Fisheries,

Moskva, 1954,:347-51

Letovanie i obrabotka lozha kak metod povysheniia ryboproduktiv nosti prudov (Estivation & bottom ground treatment of ponds as a method of increasing fish productivity)

Estivation means draining & leaving a fish-pend fallow for the summer. The bottom is treated appropriately & cultivated to a crop. Tests performed. Effect on properties of the soil. Fish-feed resources. Bearing on vegetation. Effect on fish productivity. Estivation as a sanitary measure.

Molnikov, G.B. & A.M. 582455 Chaplina (1957)

Proc. of the Conference on Fisheries, Moskva, 1954,:352-9

Forsirovanic rosta molodi karpa v rybopitomnikakh Dnopropetrovskoi oblasti (Stimulating the growth of young carp in the fish nurseries of the Dnopropetrovsk rogion)

Description & results of zooplankton breeding pools arranged within the ponds of fish hatcheries & nurseries. Nature & amount of fertilizer & fish-feed.

FAO:go

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582456

Gracheva, M.N. (1957) 582458

Proc. of the Conference on Fisheries,

Moskva, 1954,:381-5

Osnovnyo printsipy vyrashchivaniia
raduzhnoi foreli (Basic principlos
for growing rainbow trout)

Stimulation of natural food to roduce cost at initial stage. Proportion of vogetal foodstuffs in artificial food. Donsity of population in ponds according to season. Doath rate & yields.

FAOsgo

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Kapustin, N.P. (1957)

Proc. of the Conference on Fisheries, Moskva, 1954,:360-6

Donnoe gazootdelenie i rozhim zimovki karpa v kolkhoznykh prudovykh khoziaistvakh USSR (Gas liberated from the bottom & the regime of carp wintering in collective farms' fish ponds in the Ukrainian SSR)

Analysis of gases liberated from the bottom, for controlling death rates in ico-bound carp-ponds. The main cause is the critical 02: CO2 ratio.

FAO:go.

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Stroganov, N.S. (1957) 582459

Proc. of the Conforonce on Fisherics,

Moskva, 1954,:386-98

Ekologo-fiziologichoskie issledovaniia
po vurashchivaniiu osetrovykh ryb v
prudakh Moskovskoi oblasti
(Ecological & physiological research for
sturgeon breeding in pends of the
Moscow region)

Growth of Aciponseridae in ponds. Monoculture or combined breeding with herbivorous fish is recommended. Natural & artificial food. Density, death rate, loss of weight & chemical composition of wintering sturgeon in ponds. FAO:go

Kirpichnikov, V.S. (1957) 582457 Proc. of the Conference on Fisheries,

Moskva, 1954,:367-80
Sozdanie novoi severnoi gibridnoi porody karpa (Creation of a new variety of northern hybrid carp)

Hybrid of domestic carp with the coldresisting Amur wild species. Repeated cross-breading, procedure & results. Bauer, O.N. (1957) 582460 Proc. of the Conference on Fisheries, Moskva, 1954,:399-403

Vliainio parazitarnykh zabolovannii na ryboproduktivnost prudov (Influence of parasitic diseases on fish productivity in ponds)

Main reason of infection - excessive density of the same spp. intermixing of reproducers & larvae. Prevention & remedies - periodical estivation of pends (draining & leaving fallow for a season, treatment of the bottom), combined breeding of unrelated spp., control over living feed.

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Mazokhin-Porshniakov, G.A. (1957)582461 Proc. of the Conference on Fisheries,

Moskva, 1954, :404-5 Ispolzovanie ultrafioletovogo izluchomia v borbe s vrodnymi nasokamymi v prudovykh khoziaistvakh (Usc of ultraviolet irradiation in the control over harmful insects on pond fish-farms)

Invisible light, ultraviolet rays, produced by quartz-mercury lamps, attracts more insects than ordinary light. Simple insecticide contrivances attached. Tentative indication of time of night & conditions for attracting noxious aquatic insects without harming the useful. FAO: go

582464 Kokhnonko, S.V. (1957) Fish. Ind., Moscow, 33(4):66-8 Rasprostranonie i ulovy ugria v vodocmakh Belerusskoi SSR (Propagation & catches of cels in Belorussian SSR bodies of water)

Data on natural propagation & artificial stocking of lakes with ecls. Favourable conditions for fishing & data on catches.

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Nikolskii, G.V. (1957) 582462 Fish. Ind., Moscow, 33(4):60-4 Rekonstruktsila stoka basseina Amura i voprosy rybnogo khoziaistva arrangement of the Amur basin riverflow & problems of pisciculture)

Proposed hydraulic projects & ensuing fish conservation problems. Suggestions on fishways, nurseries, artificial spanning grounds for anadromous fish. On thorough studies of eventual harm caused to both spawners & smolts during their run over hydraulic structures. Effect on resident fish.

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Irikhimovich, A.I. & A.G. 582465 Fish. Ind., Moscow, 33(4):68-9 K voprosu ob akklimatizatsii Chudskogo siga v vodocmakh Moldavii of acclimatizing lake Chudskoe whitefish in Moldavian bodies of water)

Whitefish, introduced into ponds, greatly differing by the chemical composition & temperature of water from thoir native lake, produced specimens with favourable weight & sexual maturity indices. Acclimatization in Moldavia proved possible.

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Trotiakov, F.F. (1957) 582463 Fish. Ind., Moscow, 33(4):64-6 K okhrane osovrovykh v Kaspiiskom basscine (Conservation of Aciponseridae in the basin of the Caspian Sca)

States figures denoting dangerous reduction of sturgeon reserves. Suggests to forbid the use of cortain gear & to limit fishing grounds.

582466 Ryzhenko, M.I. (1957) Fish. Ind., Moscow, 33(5):14-8 Lov soldi raznoglubinnym tralom (Herring fishing by trawls operated at variable depths)

Catches effected by variable-depth trawls. Advantages over drift nets; every trawlor should be provided with ocho-sounders. Trawls must be lighter & stronger. Methods for discharging fish should be improved & fishing pumps introduced. Crows should be better trained for following shoals.

FiB: go

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FiB:go

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Soloviev, B.S. (1957) 582467 Pish.Ind., Moscow, 33(5):23-5 Ob otbiraiushchei setei (Selectivity of nots)

Operational tests of selectivity carried out on herrings by Atlantic fisheries. Data on the relation between sizes of fish & mosh with regard to the former's fatness & spawning conditions.

FiB:go

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FiB:go

Chortov, L.F. (1957)

vonnaia zadacha

the discussions.

Fish. Ind., Moscow, 33(5):66

Borba s zagriazneniom rybokhoziaist-

pollution of fish producing inland

Briof summary of discussions at a

meeting promoted by the Academy of Science. Representatives of industrial ministries & of the principal sanitary piscicultural institutions took part in

vennykh vodocmov - vazhnaia gosudarst-

waters - an important state problem)

(Control over

F

582470

Zaichik, K.S. (1957) 582468
Fish.Ind., Moscow, 33(5):26-7
Iz opyta ekspluatatsii rybonasosnykh
ustanovok (Operational experience
with fish-pumping plants)

Suggestions for improving fish-pumping plants: mechanization of cortain operations; adequate protection of olectric motors & lamps; cooling of fish before storing in the hold.

FiB:go

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Berdichevskii, L.S. (1957) 582471
Vop. Ikhtiol., (9):3-18
Sostoianic i puti uvelicheniia zapasev
tsennykh promyslovykh ryb v vodocmakh
SSSR (Situation of & ways to increase
the reserves of valuable commercial fish
in bodies of water in USSR)

The increase of overall catches is due to the development of high sea fisheries Catches in inland waters, both fresh & salt, are considerably decreasing. Causes: water pellution, lowering of inland seas' level, obstruction of estuaries etc. Remedies: conservation measures, regulated fishing, artificial breeding. FAO:go

Kisolev, O.N. (1957) 582469
Fish.Ind., Moscow, 33(5):62-5
O raspredelenii i pavedonii treski i pikshi v Barentsovom more
(Distribution & behaviour of cod & haddock in the Barents sea)

Data collected by an exploring ship by means of ocho-sounders. Concentrations & migrations, both herizontal & vertical. Dopth below the surface seems to be a more important factor than height ever the bettom. Density of sheals increases in shallow water.

FiB:go

M

Palonichko, Z.G. (1957)

Vop. Ikhtiol., (9):19-28

Osnovnye zakonomornosti razvitiia belomorskoi ikhtiofauny (Basic laws of development of the White sea fish population)

Description of poculiar features of the White sea water regime. Local & migratory fish. Possibilities for acclimatizing certain ocean spp. producing demorsal adhesive spawn. Certain spp. of the genera Coregonus & Stenodus could thrive in brackish bays at river estuaries.

FAOsgo

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582473 Koblitskaia, A.F. (1957) Vop. Ikhtiol., (9):29-54 Znachonic nizoviov delty Volgi dlia noresta ryb (Importance of the lower

part of the Volga delta for use as spawning ground by fishes)

Data on spawning of various spp. Pattern of the dolta consisting of 3 main bolts. Flood-water regime, temperature & their bearing on spawning processes.

FAOsgo

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582474

FAOsgo

poriod)

Zhukovskii, G.M. (1957)

Vop. Ikhtiol., (9):78-90

measures recommended.

Zamakhaov, D.F. (1957)

Vop. Ilthtiol., (9):91-114

Nerestovye migratsii i mesta neresta .

donskogo rybtsa Vimba vimba natio cari-

grounds of Vimba vimba natio carinata)

of the Tsymla water reservoir, on the

Up to date studies & conservation

behaviour & maturity of reproducers at

Data. collected prior to the construction

different seasons & points of the river.

Izmeneniia polovogo i razmernogo sostava

soldoi v poriod migratsii (Changos occurring in the sex & size proportions

Azov-Black Sca marine & anadromous spp.

among Clupeidae during the migratory

Studies carried out with Caspian &

of the genus Alosa. At the same age

males are smaller than females. Males become sexually mature earlier. Females

(Spawning migrations & spawning

MF

582477

582476

Alekseeva, S.P. (1957)

Vop. Ikhtiol., (9):55-67
Materialy po izuchoniiu polovogo tsikla sazana delty Volgi (Results of studies carried out on the sexual cycle of wild carp in Volga delta)

Characteristics of the spawning process, behaviour of reproducers, influence of hydrologic factors on the development of ovicells. Studios carried out in natural & artificial surroundings.

FAO:go

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Altukhov, K.A. (1957) 582475 Vop. Ikhtiol., (9):68-77

Norostilishcha i usloviia norosta soldi v Kandalkshskom zalivo (Spawning grounds & conditions in which horrings spawn in the Kandalaksha bay)

Description of methods & gear used. The White Sea herring deposits its eggs in shallow water on certain algae. Location & extent of spawning grounds.

live longer.

Ginsburg, Ia.I. (1957)

582478

Vop. Ikhtiol., (9):115-28 O biologii molodi osetrovykh reki Kury (Biology of young Acipenseridae in the river Kura)

Data on spawning & fry behaviour in natural conditions, prior to construction of hydraulic works, useful for rational breeding of Acipensoridae. Influence of floods & strength of riverflow on the quality of seaward born fry. Poculiarities of different spp.

FA0:go

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Salnikov, N.E. (1957) 582479 Vop. Ikhtiol., (9):129-32 O sluchaiakh giboli khamsy v Azovskom (Casos of wholosalo doath of anchovics in the Azov soa)

Anchovies perish in large quantities owing to abrupt drops of temperature, to a short fattoning season, of to deficiency of plankton, which leaves thom unprepared for wintering in the Black sea. Plankton deficiency is caused largely by the harmessing of the Don riverflow.

FAO:go

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FAO: go

Protasov. V.R. (1957)

Black soa fish)

Vop. Ikhtiol., (9):144-6

Reaktsiia nekotorykh Chernomorskikh ryb

na svet (Reaction to light of some

Description of experiments performed in

aquariums on soad, sciaenids & young

sturgoon: Different reaction to light

with rogard both to colour & intensity.

MF

582482

Datsko, V.G. (1957) 582480 Vop. Ikhtiol., (9):133-41 Gidrokhimichoskii rozhim Chernogo moria i ogo znachenie dlia razvitiia rybo-(Hydro-chemical rogime of the Black soa & its importance for the development of fisheries)

According to an established opinion, the Black sea is divided into 2 strate: uppor oxydizing & the lower anaerobic reducing zones. Data on studies carried out for disclosing contents & vertical exchange of substances & the conditions for development of marine life.

FAO: go

Bukirov, A.I. & Z.M. 582483 (1957)Pushkina Vop. Ikhtiol., (9):147-51 O nekotorykh urodstvakh u ryb (Cortain monstrositios occurring in fishes)

Doscription of 2 specimens, a chub & a perch as compared to normal forms. Teratological studies should be promoted with regard to causes & laws.

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Drik, V.A. (1957) 582481 Vop. Ikhtiol., (9):142-3 Ob ozimykh i iarovykh rasakh u rechnoi minogi Lampotra fluviatilis L. (Winter breading & summer breeding strains of the river lamproy L. fluviatilis L.)

The existing winter & summer breeds is contradicted by experimental studies of the development & maturation of spocimens, chosen among lamproys entering the rivers both in autumn & in spring.

Zhukova, A.I. (1957) 582484 Vop. Ikhtiol., (9):152-68 Znachenie microorganizmov dlia kormovoi bazy ryb (Importance of microorganisms for the food reserves of fishos)

Brief description of micro-biologic worms on invortobrates ' nutrition. Experimental studies on the function of bacteria in the alimentation of benthic invertebrates of the northern area of the Caspian sea.

FAO: go

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Assman, A.V. (1957) 582485

Vop. Ikhtiol., (9):169-87

Mikroorganizmy kak donatory vitaminov
dlia pitaniia molodi ryb (Microorganisms as a source of vitamins in the
food of young fish)

Experiments carried out on artificial feed of various fishes. Vitamin contents in microbe cultures. Daily rations. Effect on the growth & health of fish.

MF

- FAO: sjh

Dresscher, Th.G.N. &

the Amsterdam area)

de Ridder, M. (1958)

Hydrobiologia, 11:99-118

rotifers from Camargue)

of Amsterdam.

Hydrobiologia, 11:93-8

A.J.J. Gispon van dor Wog (1958)

Quelques organismes sporadiques du

(Some sporadic organisms of plankton in

plancton de la région d'Amsterdam

Describes Actinomyxids of gonus

Triactinomyxon parasitic in Tubifex tubifex of freshwaters in surroundings

Rocherches sur les rotifores des eaux

rotifers of brackish waters. III. Some

Notes on occurrence of spp. found in

April, 1957, with some data on physico-

chemical conditions of the environment.

saumâtres. III. Quelques retifères de la Camargue (Researches en the

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582489

582488

Braginskii, L.P. (1957) 582486 Vop.Ikhtiol., (9):188-91

Razmerno-vesovaia kharakteristika rukovediashchikh form prudovege zooplanktena (Characteristics by size & weight of the principal species of pend zeoplankten)

Average weight of spp. of different sex & stage of development. Consumption by carp fry.

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FAO:sjh

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Korzhuev, P.A. & L.I. 582487
Radzinskaia (1957)
Vop.Ikhtiol., (9):192-6
O mikrometode opredeleniia gemoglobina (Micro-method for disclosing homo-

Description of the pyramidon method of testing blood for hemoglobin, as compared to other methods. The high sensitivity makes possible the analysis of strongly diluted blood with low hemoglobin contents. Convenient for use on small invertebrates, fish fry etc.

FAO: go

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globin)

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Round, F.E. (1958) 582490 Hydrobiologia, 11:119-27 Observations on the diatom flora of Braunton Burrows, N. Devon

Spp. composition of samples from aquatic habitats in this dunes area.

FAO:sjh

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Irondo-Mario, I.C. (1958) 582491 Hydrobiologia, 11:128-42 Los Staurastrum do la Gaspósio P.Q. Can. (The Staurastrum from Gaspósic P.Q. Can.) Description of & notes on spp. of the genus Staurastrum in province of Quoboc. F FAO:sjh Lund, J.W.G., C. Kipling & 582492 I.D. Le Cron Hydrobiologia, 11:143-70 The inverted microscope method of

van Oyo, P. (1958) 582494 Hydrobiologia, 11:182-3 Prof. Dr. August Thionemann 75 years

A short biography of this limnologist.

FAO:sjh

T

estimating algal numbers and the statistical basis of estimations by counting

Various methods for estimation of populations of algae & other small fresh water organisms are described. A method, basically that of Utormöhl, of counting is described in detail using an inverted microscope. Data are also given for a variant using a normal microscope & for a method of using a haomocytometer for the larger plankton algae. MF FAO:sjh

Pourriot, R. (1958) 582495 Hydrobiologia, 11:189-97 Sur l'élevage des rotifères au (Rotifor breeding in laboratoire the laboratory)

2 years' work on culture to raiso additional spp. without reducing production. Discusses habitat, feeding habits & brooding of spp. of Brachionus, Koratolla, Buchlanis, Platyias, Rotaria, Trichotria, Mytilina, Ancurcopsis, Notholca, Trichocorca, Notommata, Eosphora, Dicranophorus & Ptygura.

Hosso, P.R. (1958) 582493 Hydrobiologia, 11:171-81 Fixation of sulphur in the muds of Lako Victoria

Analyses of muds, respiremeter experiments, sorption of sulphates. FAO: tjj F

Ford, J.B. & R.E. Hall (1958) 582496 Hydrobiologia, 11:198-204 A grab for quantitative sampling in stroam muds

Reviews the characteristics required in ! samples from a small area of muddy bottom & describes a new grab capable of taking accurate samples to a known depth.

FAOssjh

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FA0 swad

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Cholnoky, B.J. (1958) 582497 Hydrobiologia, 11:205-66 Hydrobiologische Untersuchungen in Transvaal II. Solbstroinigung im Jukskei Crocodilo Flussystem (Hydrobiological invostigations in Transvaal II. Self purification in the Jukskoi crocodile river system)

Lists of phytoplankton flora from various localities in the river system & discussion on the self-purification using phytoplankton as indicator organisms.

FAO:tl

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algao

Capricorn.

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582498 Spaas, J.T. (1958) Hydrobiologia, 11:267-74 Contributions to the comparative physiology and genetics of the European salmonidae. I. Method for the determination of the oxygen consumption in Ova. Alevins and fishes of different sizos

Describes a method of measuring oxygen content of water before & after it passes the test organism.

FAO: wad

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582501

Szidat, L. (1958) Arch. Hydrobiol., 54(1-2):174-208 Versuch einer Analyse des Problems der Anpassung von Mecrestieren an das Süss-(Attempt to analyse the problems of acclimatization of marine animals in fresh water)

Woodhoad, N. & R.D. Tweed (1958) 582500

A check list of tropical West African

Lists spp. recorded from those areas

between the tropics of Cancor &

Hydrobiologia, 11:299-395

Review of existing literature on the physiological problems of relicts & migratory animals.

FAOstl

MF

Moons, N.L. Wibaut-Isobroe (1958)582499 Hydrobiologia, 11:275-98 Plankton from the Noordzeekanaal

Describes studies, 1936-37, on the relationships of the plankton in this coral to other basins in the Notherlands & to the North Sea.

Poquognat, W.E. (1958) Sci. Amor., 198(1):84-90 Whalos, plankton and man

582502

Ill. popular review of ecology of the group.

TAOcwad

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FAO:sjh

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McLellan, H.J. (1958) 582503 J.Fish.Res.Bd Can., 15:115-34 Energy considerations in the Bay of Fundy system

Tho rates at which tidal energy is dissipated in the area in various ways are calculated, the Passamaquoddy Project is evaluated & the effect which the extraction of additional power from the system would have on tidal range is evaluated.

GLK:tl

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GLK: wad

Lawler, G.H. & N.H.F.

J. Fish. Res. Bd Can., 15:203-16

Describes chemical, physical &

lakes conducted as part of

investigations on control of

Limnological studies of Heming lake, Manitoba, and two adjacont lakes

biological studies of small cutrophic

Triachophorus. Lists flora & fauna

including 13 spp. of fish & a sp. of

Watson

fish parasites.

McLaron, I.A. (1958)

582507

582506

Dingle, J.R. (1958) 582504 J.Fish.Res.Bd Can., 15:135-53 Proteins in fish muscle. II. On the extraction of myosin from cod muscle with potassium iodide

Describes methods used in extracting a substance from Gadus callarias, compares it with myosins from other cold-blooded animals & with rabbit myosin, & compares it with cod actomyosin with respect to electrophoresis, sedimentation, viscosity & solubility.

GLK: wad

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J.Fish.Res.Bd Can., 15:219-27 Some aspects of growth and reproduction of the bearded seal, Brignathus barbatus (Erxleben)

(1958)

Based on material from 113 spocimens from the Canadian Arctic, discusses growth, age determination, age at maturity, breeding season, sexual cycle & relationships between growth & sexuality.

GLK: wad

M

Dunbar, M.J. (1958) J.Fish.Res. Bd Can., 15:155-201 582505 Physical oceanographic results of the CALANUS expeditions in Ungava Bay, Frobisher Bay, Cumberland Sound, Hudson Strait and Northern Hudson Bay, 1949-55

Tathymetry, temperature, salinity & density profiles, description of density increasing & hydrodynamic pattern of the area.

582508 Alderdice, D.F., W.P. Wickett (1958)& J.R. Brett J.Fich.Res. Bd Can., 15:229-49 Some effects of temporary exposure to low dissolved oxygen levels on Pacific salmon eggs

Describes experiments with Oncorhynchus keta.

GLK:tl

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GLK: wad

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FAO/58/9/6635

Hoar, W.S. (1958) J.Fish.Res.Bd Can., 15:251-74 Rapid learning of a constant of travelling schools of juvenile salmon Describes experiments with actimigrating Oncorhynchus keta, 0.	Pacific vely	Herbert, D.W.M. & H.T. Mann (1958) Salm.Trout Mag., (153):99-101 The tolerance of some fresh-wate for sea water Methods used & results obtained experiments with Rutilus rutilus	in
gorbuscha & O. nerka. GLK:wad	MF	fluviatilis. FAO:wad	MF
van Someren, V.D. (1958) Salm.Trout Mag., (153):77-82 Correspondence Comments on fishways & fish scr with special reference to an ar "New approach to fish pass desi Sedgwick, Salm.Trout Mag., May	ticle gn", by	Healy, A. & M. Kennedy (1958) Salm.Trout Mag., (153):102-14 Trout in Lough Glore, Co. Westme Ireland Describes studies on Salmo trutt 87-acre lake: age-growth; stomac contents; parasites; population estimations (tag & recapture); renumeration; predation by Esox.	a in an
FAO:wad	MF	FAO: wad	MF
Mansfield, K. (1958) Salm.Trout Mag., (153):94-8 Pike-perch in England Discusses the history & present of Lucioperca sandra & Stizoste vitreum in England.		Went, A.E.J. (1958) Salm.Trout Mag., (153):122-30 Historical notes on the fisheric the river Barrow Describes the fish & fisherics o Irish salmon stream.	

FAO: wad

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FAO/58/9/6635

1(6):112

MF

582518 Hoyle, G. (1958) 582515 Anonymous (1958) Nature, Lond., 181:1134 Nature, Lond., 181:1115-6 Two inhibitory fibres forming synapses The sea otter with a single cell Notes on the life history, habits, Discussion with respect to crustacea. extermination & present conservation of the species on the Northwest Pacific Ocean. M GLK: wad M GLH: hr 582519 Abramson, H.A., B. Weiss & Saito, T., Ken-Ichi Arai & 582516 (1958)M.O. Baron (1958)T. Tanaka Nature, Lond., 181:1136-7 Nature, Lond., 181:1127-8 Comparison of effect of lysergic acid Changes in adenine nucleotides of squid diethylamide with potassium cyanide and muscle other respiratory inhibitors on the Siamese fighting fish Methods & results of a study following freezing & comparison with results Contents as per title. obtained from a similar study of carpmuscle. F GLK: wad MF GLK: wad 582520 Ryland, J.S. (1958) De Marco, C. & E. Antonini (1958) 582517 Nature, Lond., 181:1146-7 Nature, Lond., 181:1128 Bugula simplex Hincks, a newly Amino-acid composition of haemoglobin recognized polyzoan from British waters from Thunnus thynnus Distributional records, comparison with Results as determined by chromatography other spp., partial description. on an ion-exchange resin.

GLK wad

PAO /58/9/6:35

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GLK:wad

582521 Boauchamp, R.S.A. (1958) Mature, Lond., 181:1634-6 Utilizing the natural resources of Lake Victoria for the benefit of fisheries and agriculture A review of knowledge of hydrobiology of this area, incl. results of study of Tilapia stocks & fisheries GLK: sjh F Corbin, P.G. (1958) 582522 Nature, Lond., 181:1659 A new British fish (Gabius forsteri) Description & biological notes on fish, many specimens of which have been caught by G.R. Forster during SCUBA diving in English Channel & coast of Spain.

Stolk, A. (1958) Naturo, Lond., 181:1660 Pathological parthenogenesis in viviparous toothcarps

Description of process in Lebistes reticulatus & Xiphophorus helleri, & its relation to parasitization by the phycomycete Ichthyophonus hoferi.

GLK: sjh

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582524

Koefocd, E. (1958) 582525 Rep. Sars N. Atl. Deep Sea Exped., 4Pt.2 (6)

Isospondyli 2: Heterophotodormi, 1 (with addenda and corrigenda to Isospondyli 1)

GLK: sjh

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Eltringham, S.K. & A.R. 582523 Hockley (1958)Nature, Lond., 181:1659-60 Cocxistence of three species of the wood-boring isopod Limnoria in Southampton water

L. lignorum, L. quadripunctata & L. tripunctata in piles & test blocks.

Henry, D.P. (1957) 582526 Proc. U.S. nat. Mus., 107(3381):25-38 Some littoral barnacles from the Tuamotu, Marshall and Caroline Islands

GLK: sjh

M

Walford, L.A. (1958) Ronald Press Co., New York, 305 p. Living resources of the sea

Provides systematic appraisal of what is known about the soa & its inhabitants Examines the possibility of increasing the use of the sea's living resources; covers fishes, reptiles, seaweeds, mammals; discusses plankton harvesting, farming brackish waters, & improving fishing vessels & gear.

Found, H.R. (1957) Trade News, 10(6):3-7 The Atlantic oyster industry

A short roview article of this Canadian Atlantic coast industry, under headings: leases, experimental forms, starfish control. Notes on water quality, resistant strains to Malpeque! diseaso.

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FAO: sjh

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582530

Sastry, A.V.R. & C.

582528

Hahadevan (1957):

J.sci.industr.Res., 16B:429-31 Radioactivity of sea-floor sediments off Visakhapatnam

From radioactivity & carbonate content data it is inferred that high carbonate content corresponds to low radioactivity of scdiment. The data also support earlier work on zonal distribution of those sediments.

Anonymous (1957) 582531 Trade Hows, 10(6):8-12 Emphasis on research at INPFC Mceting

Short report of 4rd Annual Meeting of International North Pacific Fisheries Commission in Vancouver, 4-9/11/57, & incl. text of address by the Commission Chairman.

FAO:sjh

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FAO: sjh

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Frick, H.C. (1957) 582529 Trade News, 10(5):14-9 The commercial fisheries of Canada

A short review under headings : history, resources, products, marketing & prices, future demand, prospects for development! Halichondria & Halichona. Cives table of summary production statistics.

Laubonfels, M.W. de (1957) 582532 System. Zool., 6:156-9 A problem in taxonomy: the sponge genus Reniera

Examines synonymy of Raynoria, Reniera,

WAD:sjh

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582536 582533 Kufforath, H. (1957) Levi, C. (1957) System. Zool., 6:174-83 Mém. Acad. R. Sci. colon., 5(3) Quelques algues des rapides de la Ontogeny and systematics in sponges Ruzizi à Bugarama (Ruanda-Urundi) (Some algae from the rapids of Ruzizi-A review of this group, with proposed Bugarama (Ruanda-Urundi)) classification. M F HR: sjh 582534 Dyck, S. (1957) Russell, C.R. (1957) 582537 Rec. Cant. Mus., 7(1) New Zealand Mitt. Inst. Wasserwissensch., 1:87 p. Some additions to the rotatoria of the Dio Erfassung der Ausgleichswirkung von Talsperren auf die natürlichen Chatham Islands Abfluszschwankungen der Flüsse (Registration of the compensating activity of artificial lakes (dams) the natural fluctuation of the runoff of rivers) Contents as por title. F F Taylor, W.R. (1957) 582535 Ružička, (1957) Proslia, 29:132 582538 University of Michigan Press, Ann Arbor, 509 p. Die Dosmidiaceen der oberen Moldau Marine algae of the northeastern coast (Böhmerwald) (Desmidiaceae from the of North America (2nd ed.) upper Moldavia (Böhmerwald - Ceský Les)) The area with which the book deals extends from the coast of Virginia to the Arctic Circle. FAO: wad W

FAO/58/9/6635

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Althaus, B. (1957) 582539
Wiss.Z.Univ.Halle Math-Nat., 6:117-58
Faunistisch-ökologische Studien an
Rotatorien salzhaltiger Gewässer Mitteldeutschlands (Faunistic-ecological studies on rotatoria living in salt containing waters of Contral Germany)

Contents as per title.

Müller, K. (1957) 582542

Svensk FiskTidskr., 66:129-36

Experiment mod fiskevatten - ctt
genmäle (Experiment with fishing water - a reply)

Discussion on the productivity of rivers & brooks in northern Sweden & the influence of cleaning of brook bed for logg floating purposes on the bottom fauna & fishes in the brook.

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FAO:tl

arca)

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(Data on char

582543

The Allan Hancock 582540
Foundation (1957)
Univ. of S. California, Los Angeles, 39 p
Report for the period July 1, 1954 to
June 30, 1957

Lists staff & notes their activities; reports activities in fields of marine biology & oceanography & also proto-zoology & parasitology; operations of research vessel VELERO IV; library, publications.

FAO:-sjh

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Notes on the distribution of char in NW Sweden.

(Salmo alpinus) in the rivers of Sarck

Uppgifter om rödingen (Salmo alpinus)

Curry-Lindahl, K. (1957)

i Sarekområdets älvar

Svensk FiskTidskr., 66:136-8

FAO:tl

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Balasundaram, S. & al. (1957) 582541

J.sci.industr.Res., 160:8-11

Application of conversion factors for the determination of vitamin A in fish liver oils

Data from the analysis of material from unnamed sharks.

Tambs-Lyche, H. (1957) 582544 Norw.Fish.Nows, 4(2):5-8 The development of marine fisheries research in Norway

A history of research & its organization, with account of contributions made by eminent Norwegian fisherics biologists.

FAO:sjh

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FAO:sjh

Hulburt, E.M. (1957) 582545
Bull.Mar.Sci.Gulf Caribb., 7(1):21-34
Sea-level fluctuations at Charleston,
South Carolina

Daily-weekly, semi-annual, & year-toyear variations were observed. The remainder of the variations were derived primarily from the deep water beyond the shelf.

FAOssjh

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Marine biol. Laboratory, Woods Hole, 247 p. Methods for obtaining and handling marine cass and embryos

Under the general headings "Living material", "Breeding season", "Care of adults", "Procuring gametes", "Methods of observation", "The unfertilized ovum", "Fertilization and cleavage", "Time table of development", & "Later stages of development and metamorphosis", this book describes the best methods for using embryological material from 95 marine animals.

FAO:sjh

Hulburt, E.M. (1957) 582546 Biol.Bull., Wood's Hole, 112:196-219 The taxonomy of unarmored Dinophyceac of shallow embayments on Cape Cod, Massachusetts

Contents as per title.

Hisaoka, K.K. (1957) 582549

J.Horod., 48:251-2

Lordoscoliosis in the tropical fish

Panchax lineatus

Ill. note on morphological aspects of vertebral column of a deformed male specimen from Illinois.

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Hulburt, E.M. (1957) 582547 Limnol.Oceanogr., 2(1):1-11 The distribution of Neomysis americana in the estuary of the Delaware river

An account of the distribution & of the diurnal variation of this; length measurements are given. The effects of circulation & of light & salinity on distribution are discussed.

Leggiero, M. (1957) 582550

Engng News Rec., August 15, 4 p.

The pollution control act - a year later

A review of the results attained during the first year (July 1, 1956 - June 30, 1957) of federal (U.S.) construction grants for sewage works under U.S. Public Law 660.

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Kazancheev, E.N. (1957) 582551

Fish.Ind., Moscow, 33(6):7-9

O gruppovom metode razvedlti rybnykh
kosiakov v Severnom Kaspii (Teamwork method for locating fish shoals in
the North Caspian)

Advantage of teamwork by 2 ships for locating points were fishes concentrate. Description of an experiment carried out on the northern fishing grounds of the Caspian sea.

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Komarova, I.V. & V.A.

Movchan, V.A. (1957)

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Fish. Ind., Moscow, 33(6):51-2

and intensified growth of fish)

rations. Promising results.

Fish. Ind., Moscow, 33(6):47-51

Opyt uskorennogo vyrashchivaniia

estivation periods & producing an

additional crop of marketable fish

during the former half of the season.

Description of experiments carried out with carp yearlings raised to desired size by intensified feeding; woight increase, per diem & after 2 months.

Opyt po polikulture pri intensifikatsii

Experiments carried out with fish of

different spp. & ages, raised together

in ponds on intensified artificial food

(Experimental polyculture

(1957)

dvukhletkov karpa (Experiments with

intensified raising of 2-year-old carp)

Attempt to gain pond space by reducing

Musselins

Tr,

582555

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Botodatov, V.A. (1957) 582552
Fish.Ind., Moscow, 33(6):37-44
Novyi raion rybolovstva - banka
"Svordlovsk" (New fishing grounds - the "Sverdlovsk" bank)

Description of new fishing grounds on the S.W. slopes of the Flemish Cape shallow, explored by the trawler Sverdlovsk & her sister-ships. Data on bottom relief, hydraulic regime, size & composition of catches (mainly redfish) by demersal trawl.

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Kiselev, I.V. (1957) 582553
Fish.Ind., Moscow, 33(6):45-7
K motodike iskusstvennogo oplodotvorenia ikry karpa i karasei (Mothods for performing artificial fertilization of carp & crucian carp spawn)

Description of methods used, roe & milt ratio, incubation & environment.

Bervald, E.A. & O.D. 582556
Romanycheva (1957)
Fish.Ind., Moscow, 33(6):52-4
Olotnem saprete na Aralskom more
(Prohibition of summertime fishing in the Aral sea)

Data on the effect of prohibition.

Necessity to extend it to the spawning period. During the standstill, manpower should be used for improving spawning grounds. Restrictions necessary with regard to fishing gear & methods.

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582557 Danilchenko, O.P. (1957) Sokolich, A.D. (1958) 582560 Fish. Ind., Moscow, 33(6):78-80 Comm. Fish. Rev., 20(6):22 California - Anchovy and mackerel Mechenie oligozhet (Enchytraeus) radioaktivnym strontsiem (Marking of fisheries experience poorest season in oligochaeta (Enchytraeus) by radiomany years active strontium) Contonts as per title. 3 methods used for marking fish. The third is the best, consisting of feeding oligochaeta with radioactive matter, the worms being then fed to fish. Description of experiments & best conditions for rendering oligochaeta radioactive. M FiB:go FAO:sjh M Cating, J.P. (1958) 582558 Anonymous (1958) 582561 Comm. Fish. Rev., 20(6):1-5 Comm. Fish. Rev., 20(6):23 Damariscotta (Maine) alewife fishery California - Dungeness crab - yearclasses surveyed and otter trawl and Ill. survey of Pomolobus pseudoharengus beam trawl tested for sampling fishery of Atlantic coast of N. America, mainly dealing with fishways, capture Contents as per title. mothods & sampling. FAO:sjh MF FAOssjh M Van Engel, W.A. (1958) 5825591 Anonymous (1958) 582562 Comm. Fish. Rev., 20(6):6-17 Comm. Fish. Rev., 20(6):24 California - Loss of spawning beds The blue crab and its fishery in Chesapeake Bay believed major factor in decline of king salmon Fishery for & biology of Callinectes sapidus. Catches, reproduction, growth Contents as por title. & development, migrations, food. FAO:sjh M FAO:sjh MF FAC /58/9/6635

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Smith, K.A. 582018	582195		
Snow, J.R.		Toori, A.M. & R.M. Biober	582205
Sokolich, A.D.	581995	Teeri, A.I., M.E. Loughlin (=00040
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Solovicy, B.S.	582467	Teissior, G.	582215
Somerville, G.M. & L.M. Dickie		Thach, H.J.	582175
Sorokin, C.	582217	Thomas, J.B.	582050
Southcott, R.V.	582211	Thompson, S.H.	582631
Southward, A.J.	582270	Thompson, S.Y.	582233
Southward, G.M.	581954	Thomson, J.M.	582057
Spaas, J.T.	582498	Thouveny, Y.	582045
Sparrow, B.W.	581917	Threinen, C.W.	582144
Springer, S.	582126	Tibbs, J.	582264
Stahl, J.B.	582260	Tomlinson, N. & R.A. MacLoed	582031
Starik, I.E.	582339		582244
Starikova, N.D.	581890	Toncy, M.E., Jr.	581863
		Torrey, J.G.	
Starr, T.J. & W. Fosberg	581935	Tranter, D.J. 581914	
Starr, T.J., M.E. Jones &	-00-	Traung, JO.	581978
D. Martinoz	582383	Tretiakov, F.F.	582463
Starr, T.J., D. Martinoz &		Tsuchiya, Y. & Y. Sato	582242
W. Fosberg	582382	Tuominen, A.	582088
Stein, J.D.	582151	Turnor, H.J., Jr. & D.L. Bolding	582384
Steinmotz, C., Jr.	581934	Tweed, R.D.	582500
Stempion, M.F., Jr. 582060	582061		
Stickler, G.B.	582251	Unor, S.	582304
Stoker, J.J.	581909	Union Géodósique et Géophysique	
Stolk, A.	582524		582288
Stommol, H.	581964	U.K. Contral Office of	
Storr, J.F.	582156	Information	582641
Straub, C.P.	582243	U.K. Department of Scientific &	J 1
Strawn, R.K.	581987	Industrial Research	581963
Stroganov, N.S.	582459	U.K. Ministry of Agriculture	701703
	582083	Fisheries & Food 582289	582328
Stroganov, S.U. & K.T. Iurlov			582250
Suaroz Caabro, J.A.	582157	U.Y. White Fish Authority	202220
Suau, P.	582179	U.H. Dopartment of Iconomic &	E00003
	582184	Social Affairs 582092	
	582062	U.S. Lake Survey	581898
	582439	U.S. Navy Hydrographic Office	582320
	581908	U.S. Treatics & Other Internation	
	582120	Acts	582644
Swedmark, B. & G. Teissier	582215	Uyguner, B. 581851	582301
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Swingle, H.S. 582001 582002		Vallentyne, J.R.	582381
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Warburton, B., C. Hubbs & D.W. Hagen Warburton, F.Z. Ward, J.W. Washington (State), Department of Fisheries Watkins, J.C. Watson, N.H.F. Watt, K.E.F.	581938 582400 581936 582097 582060 582506 582135	Anonymous 581955 581957 581989 582017 582023 582028 582033 582036 582076 582079 582174 582212 582293 582294 582310 582313 502314 582318 582319 582325 582333 582353 582390	581979 582024 582074 582204 582298 5823316 582332 582332
Went, A.H.J. Werner, I. Wessler, H. & I. Werner Whitear, M.	581956 582364 582368 582519 582201 582338 582514 582240 581926	582393 582394 582515 582561 582562 582563 582565 582566 582567 582569 582570 582571 582573 582574 582575 582577 582578 582579 582581 582582 582583 582585 582586 582587 582589 582590 582591 582593 582594 582595	582564 582568 582572 582576 582580 582584 582588 582592 582596
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Williams, M.E. Wilson, D.P. Wilson, D.P. & F.A.J. Armstrong Wilson, W.B. Winn, H.E. Wise, J.P. Wistendahl, W.A.	581867 582272 582276 582376 582309 581911 582308		en e

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